

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

A REPOSITORY OF

Science, Literature, and General Intelligence,

DEVOTED TO

ETHNOLOGY, PHYSIOLOGY, PHRENOLOGY, PHYSIOGNOMY, SOCIOLOGY, PSYCHOLOGY, EDUCATION,
MECHANISM, AGRICULTURE, NATURAL HISTORY, AND TO ALL THOSE PROGRESSIVE
MEASURES WHICH ARE CALCULATED TO REFORM, ELEVATE, AND IMPROVE
MANKIND, SPIRITUALLY, INTELLECTUALLY, AND SOCIALLY.

Embellished with Numerous Portraits from Life, and other Engravings.

VOL. LIV. OLD SERIES.—VOL. V. NEW SERIES.

January to June, 1872.

S. R. WELLS, EDITOR.

NEW YORK:
SAMUEL R. WELLS, PUBLISHER, 389 BROADWAY
1872.



“Quiconque a une trop haute idée de la force et de la justesse de ses raisonnemens pour se croire obligé de les soumettre a une expérience mille et mille fois répétée, ne perfectionnera jamais la physiologie du cerveau.”—GALL.

“I regard Phrenology as the only system of mental philosophy which can be said to indicate, with anything like clearness and precision, man's mixed moral and intellectual nature, and as the only guide short of revelation for educating him in harmony with his faculties, as a being of power; with his wants, as a creature of necessity; and with his duties, as an agent responsible to his Maker and amenable to the laws declared by the all-wise Providence.”—

JOHN BELL, M.D.

“To Phrenology may be justly conceded the grand merit of having forced the inductive method of inquiry into mental philosophy, and thus laid the permanent foundations of a true mental science.”—*Encyclopædia Britannica*, 8th Edition.



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THE PHRENOLOGICAL JOURNAL AND LIFE ILLUSTRATED.

VOL. LIV.—No. 1.]

January, 1872.

[WHOLE No. 396.]



ELIHU B. WASHBURNE, U. S. MINISTER TO FRANCE.

THE temperament of this gentleman would be technically called Motive-Mental, or bilious-nervous. There should

be a little more plumpness and fullness as a result of a larger degree of the Vital or Sanguine temperament. As it is,

there is wiry toughness, endurance, activity, intensity, but hardly enough of the smooth, mellow, and oily in his composition or in his manifestations. Sharpness of mind, rapidity of practical judgment, clearness and force of thought rather than philosophic breadth, are the characteristics of such an intellect.

His very large Comparison gives him criticism, analytical power, and great definiteness of thought. His less Causality is hardly sufficient to give him a talent for broad generalization, invention, and originality of thought. The organ called Human Nature is very large, enabling him to judge human character with precision, and to guide and control men in a manner similar to that of the master hand that evokes the proper notes from the piano-forte.

His Language is sufficient to give him freedom of speech and accuracy of statement. His style as a speaker and writer would be pruned and precise, each word fitting its subject, and being just the right word in the right place. He seldom has to make a second explanation of a subject, his first being ample both for the scholar, and the practical man who lacks culture. As a public speaker, he would be sufficiently elevated and scholarly for the satisfaction of the cultured, and so clear and plain that common people would fully comprehend his meaning. He is more generous and sympathetic than he is smooth and bland in his manner. He wins and holds friends because of his earnest kindness, and the serviceable interest which he takes in others. He has reverence for sacred subjects and eminent persons.

He has strong firmness, which gives him persistency and thoroughness. He is watchful without being timid; exceedingly frank, open-hearted, and expressive in word and action. There is nothing disguised or concealed in his nature. He never acts as if he had some great

secret mission to carry out—some concealed personal interest. There is a directness, straightforwardness, and positiveness joined to integrity, a breadth of moral and intellectual character that makes him appear transparent, very direct, open, and sincere.

His strong social qualities enable him to win friends and retain them. He has much dignity and ambition; desires position, and is able to wield power and employ responsibility with that steady, self-reliant wisdom which marks one a leader, awakens confidence on the part of others, and gives him prominence and an influential place among men. People are willing to follow the lead of such a man, because they have confidence in his integrity as well as in his judgment.

—o—

MR. WASHBURNE was born in Livermore, Oxford (now Androscoggin) County, Maine, Sept. 23, 1816. His father, Israel Washburne, was born in Roynam, Massachusetts, on the 18th of Nov., 1784. Twenty-two years after, he removed to Maine, where in 1809 he purchased the estate in Livermore, upon which he still resides, and commenced the business of a farmer and trader; and at the same time he was associated as a partner with a firm engaged in shipbuilding and general trade at White's Landing (now Richmond), Maine. For several years he filled an official position in his town, being one of the selectmen, and he also represented that place in the State Legislature for four years.

Capt. Israel Washburne, the grandfather of our subject, took part in the war of the Revolution; was a member of the Massachusetts Convention, at which the Constitution of the United States was approved, and several times represented his district in the Legislature of the Commonwealth. Mr. Washburne's mother was Martha Benjamin, daughter of Samuel Benjamin. She was born in Livermore in 1782, and died in May, 1861. She also was of Revolutionary stock, her father having served throughout the war for Independence, and at the time of his discharge held the commission of a lieutenant.

Elihu B. Washburne was educated in the

public schools of his town and at the well-known seminary of Kent's Hill, Maine, where he laid the foundation for a substantial mental training. After leaving school he was for a season an apprentice in the office of the *Kennebec Journal*, in Augusta, while the Hon. Luther Leverance was editor and one of the proprietors. About the year 1837 he commenced the study of the law with John Otis, Esq., of Hallowell, and continued his studies with Mr. E. H. Derby, of Boston, joining with his private training the privileges of the law school in Cambridge. In 1840 he was admitted to the bar, and shortly afterward went to Galena, Illinois, where he entered upon the practice of the profession of his choice. In 1845 he entered into a copartnership relation with Charles S. Hempsted, a well-known and able lawyer of Galena. This professional association continued for ten years, and was marked with very satisfactory success. In 1852 Mr. Washburne was elected to Congress by the old Whig party, and was eight times re-elected from the Galena district. After the death of Thaddeus Stevens, the eminent Congressional leader in all important measures affecting the national interest during the late war, Mr. Washburne became Chairman of the Committee on Appropriations. He had for many years served as Chairman of the Committee on Commerce.

It was not until the beginning of the war that Mr. Washburne became acquainted with Ulysses S. Grant, whom he then recommended to Gov. Yates as a worthy candidate for a colonel's commission. It was said that before the victory of Fort Donelson, Mr. Washburne expressed himself to the effect that Grant would be the "coming" man of the war, and such was his earnestness that his friends playfully twitted him with having "Grant on the brain." He was also urgent in the matter of securing Grant's promotion to a brigadier-generalship, and after the battle of Pittsburgh Landing, when Grant's reputation was somewhat under a cloud, he faithfully adhered to him, warmly reiterating his opinion that Grant would yet come out all right. Subsequent events proved Mr. Washburne's sagacity in thus estimating his friend. He was the instrument by which the bills were introduced into Congress which made Grant Lieutenant-General, and afterward General.

He had entered upon the seventeenth year of his Congressional service when he was appointed to the highest position in the President's cabinet—Secretary of State. He did not occupy this elevated position but a few months, not that he was unequal to the duties of the office, for his record in Congress amply proved him to be a man of superior strength of character, sound judgment, and unflinching integrity. The death of William L. Dayton, Minister to France, having created a vacancy in that important foreign relation, Mr. Washburne was offered the mission, and the state of his health suggesting the need of a change of residence and occupation, he accepted it, and so withdrew from the Secretaryship of State. His record as American Minister to France is a shining one. He has held the office under circumstances of peculiar difficulty, amid all the transitions of fortune which have characterized French political affairs from the opening of the war with Prussia to the suppression of the Commune in Paris. The incidents of his Ministerial career have occurred so recently, and are so fresh in the mind of the reader, that it would be almost superfluous for us to recount them in detail.

During the continuance of the hostilities between Prussia and France, Minister Washburne acted a very efficient part as the protector of the German residents in Paris. In the London *Telegraph* of August 28th, 1870, a paragraph occurs which has the following language:

"Mr. Washburne, the American Minister, has a hard time of it. The Germans in France are under his protection. Every German who is arrested under the provisions of the recent proclamation of General Trochu demands at once to be taken before Minister Washburne for an examination of the case."

And after the fall of Sedan and the surrender of Louis Napoleon, the Republic was proclaimed in Paris. While the Ministers of other nations were treated with indignity, Mr. Washburne was serenaded and applauded by the people wherever he was recognized. Much of this high favor, however, may be said to have had its origin in the popular notion that since Paris had thrown up her cap for the republic, America would interfere with an armed force in her behalf. But be

that as it may, it is nevertheless certain that he upheld at all times the dignity of his flag, and commanded the respect of both Germans and Frenchmen.

In this country, especially, he has elicited attention because of his marked interest in Western improvements, in an economical administration of national affairs, and, at the same time, in an energetic prosecution of everything relating to the departments of government. In the great fight during the spring and summer of 1854 over the Nebraska bill, he was one the firmest, bravest,

and most efficient of its opponents. During the war he was looked upon as the conspicuous enemy of that great army of swindlers that watched every opportunity for preying upon the nation under the cloak of "army contracts." He was then generally called the "Watch-dog of the Treasury," and suffered not a little from the attacks of unscrupulous men who were greedy of gain.

In 1845 Mr. Washburne married Miss Adell Gratiot, daughter of Gen. Gratiot, of Gratiot's Grove, Wisconsin. He has had seven children, six of whom are now living.

WHAT CAN I DO BEST?

GENERALLY, that which a man can do best, it is best for him to do. He will thereby serve the community and himself more effectually than by engaging in that to which he is not so well adapted by nature. Yet there may be some exceptions to this rule; a man may have artistic taste and talent, and he might for a time earn more money for himself, and render a higher special service to the world in making pictures, in modeling statues, in designing patterns, than he could in any grosser forms of effort. Yet his health may be delicate, it may be necessary for him to be in the open air and sunshine, and to rough it in order that his health may be built up and his life thereby maintained. Certainly it is not a man's duty to commit suicide for the sake of making one or two fine statues or pictures for the world, for if he has artistic taste, he may do a great deal to beautify and embellish life besides putting his thoughts upon canvas or in marble, and by abandoning art as a profession maintain his life to a good age. A man's duty to himself, to his friends, and the world is to prolong his life and put into that life thus prolonged usefulness, benefit to himself and others. Unfortunately, an artistic temperament is apt to be an unhealthy one, as artistic habits in many respects do not promote vigor of body. The delicate may be made comparatively strong by out-door life; and many a man who wields a vigorous pen, or whose eloquent words are potent for good, but whose health would be sacrificed in a few years by devotion to such mental occupa-

tions, might prolong his life and his usefulness by farming, by driving a team, by associating with a party of engineers, working in the sunshine and fresh breezes of heaven, climbing mountains, or going to sea.

When the world comes to know that the body as well as the mind is valuable; that though the body is but the framework of the soul in the present life, and a prime essential to mental health and power, it will comprehend the necessity of obedience to the health laws, and there will be less sneering at the term "muscular Christianity." The machinery of a locomotive would be but rubbish without the frame which holds it in place. So a healthy body bears a similar relation to mental life. Our schools should be so remodeled that physical culture shall be assured to every pupil; so that while he acquires mental culture his brain shall not be developed at the expense of his body; his education shall not be achieved at the expense of his future life and usefulness.

When every editor's room, every clergyman's study, every lawyer's office, every accountant's department, as well as every school, shall have some means for frequent and effective muscular exercise—say a pair of light dumb-bells weighing two pounds each for men, and lighter ones for half-grown persons and children—so that when the throbbing brow of the thinker and writer, when the tired brain of the artist seems to indicate rest, and the disturbed circulation requires equalizing, let the clergyman, the artist, the accountant take the dumb-bells, and in

three minutes' time he can distribute the blood which is congesting his brain or his lungs and send it tingling to the feet; he could thus make every muscle hunger for nutrition, and that hunger will react upon the stomach to provoke appetite and promote digestion; and when he goes to his table, instead of looking at everything with a morbid disgust, he will take hold of plain beef and vegetables with a relish, and have the power of digestion so healthy and vigorous as to convert food into nutrition, and then his sermons, his art work, his accounts, or other mental labor, will be normal, vigorous, successful. Michael Angelo had a body as well as a head, and his immortal works of art evince strength as well as beauty—if we may say it, muscle as well as brain.

So long as bodies are attenuated and pulsation weak and discouraged, the inspirations stunted and insufficient, and digestion a mockery, so long will the works of thinkers and writers and artists be warped, and so unnatural and dwarfed as to be less serviceable to the world than is necessary. A brawny frame and deep-chested strength, and vigorous and sturdy manhood, with the large and amply developed and well-fed brain, are conditions for the highest order of mental labor. The world needs a theology that has stamina, heartiness, breadth, knowledge of life and duty. The sermons of the Master related to daily life and daily work; and people who had to do the drudgery of daily life thoroughly understood his illustrations. Abstract theology and morals which are wrought out in the cloister have too little relation to daily life to be effective. Art that is born of the woods, mountains, and sea has strength in it, and it stirs men's blood who know what life is.

Let all persons, therefore, study the laws of daily life—physiology being the first and most important study. Chemistry, as applied to food and air, should also be understood to a certain extent, so that man may feed himself properly, and so relate himself to outer life as not to poison himself by bad air in confined apartments; that he may avoid miasmatic districts as a dwelling-place; that he may so obey the laws of cleanliness that his health may be promoted, and cultivate muscular power so that his constitution may have vigor. Then if duty calls him to the

drudgeries of life, he may perform those duties manfully; if he be called to sedentary occupations, he may know how to maintain his health and constitutional vigor while he is cultivating art or pursuing strictly intellectual avocations. The teacher should be a robust man—not necessarily a gladiatorial one; there is no reason why teachers should be slim and thin and pale. Ministers need not walk with sepulchral solemnity, and carry a paleness and weakness of pulse which bodes little of the present life except its termination. Editors, whose function it is to instruct the public, should not be dwarfed for lack of physical development or healthful conditions. In short, the thinking world should maintain health of body so that it can think vigorously.

Public sentiment needs to undergo a change in regard to that which is respectable relative to daily occupation. So long as it is regarded as disreputable to work heartily, even for the sake of needed exercise, so long intellectual workers will be slaves to dyspepsia, nervous diseases, and to a diminution of their power by fifty per cent., as well as slaves to a perverted public sentiment.

The question, "What can I do best?" is, therefore, not answered simply by the study of a man's phrenological developments, but the condition of his physiology, the strength and health of his body, should also form a part of the investigation. As we have said, because a man has art talent it does not follow that he should pursue it unless he has such vigor of constitution that he can bear a considerable degree of sedentary occupation. Because a man has talent for writing he is not to devote himself solely to writing, regardless of the bodily health, and thus have his life eclipsed forever just as he is dawning into a glorious manhood. The devoted Gospel minister who was advised by us to take life a little more easily, to refrain from preaching three times every Sunday and two or three times during the week, and who responded, "The body is nothing; the soul and heaven are all," furnishes a poor example for general imitation. As well might a horse be pushed in his speed to accomplish a journey of a hundred miles in a day, and have that day's work his last, as for a man to violate every principle of health and longevity

in trying to put the work of four years into one; and the trouble is, that such excessive work is not well done. We seriously doubt whether a man can preach more than two sermons in a week in a proper manner, and follow it for years, as we doubt whether a man can work more than from eight to twelve hours at engineering, at carpentry, and do as good work as he is capable of doing by working within appropriate limits. In other words, when the brain is drained dry of mental vigor, when the system is feverish and abnormal in its condition, it will not perform normal functions. When a man is to row a race or run for a wager, when he is to perform any great feat, he is rested, he is exer-

cised, he is groomed, he is fed with reference to his great labor; he is not worked eighteen hours a day and fed on crackers and green tea. But students are often encouraged by teachers to consume the midnight oil—though some unfortunately consume much midnight champagne and tobacco, which is worse than midnight study; and men who are in earnest to do a great deal will sometimes work eighteen hours in the twenty-four, each doing bad work in proportion as he is exhausted and his faculties wearied and blunted. Let men study and work under right laws of action, and the world's work and the world's thought will have very much more vigor and a better influence.

Department of Religion and Psychology.

Know,

Without or star, or angel, for their guide,

Who worships God shall find him.—*Young's Night Thoughts.*

The soul, the mother of deep fears, of high hopes infinite;

Of glorious dreams, mysterious tears, of sleepless inner sight.—*Mrs. Hemans.*

CHEERFUL GIVING.

BY MRS. M. LEONARD

WE often think to ourselves, at sight of the bountifulness of others, of the old saying, "It is a blessed thing to have enough, and to spare." It is just possible, however, that the sense of blessedness is conveyed to us more vividly by the plentifulness or abundance implied therein, than by the duty suggested in the last two words. In truth, we are too apt to look upon the words "to spare" as a happy significance of our prosperity, and a promise of what more we will enjoy at a future day, rather than as a means from which we *will* spare to promote comfort to others who have not enough. But in this single word so much difficulty arises. The "enough" of different people does so widely vary. The power of drawing the line of sufficiency, however, lies entirely within ourselves, partly according as we are living for ourselves or for others, and partly, also, to the nature God has given us.

There are needs which are not common to all. A less common nature has its less common desires. It craves certain surroundings,

and must have them to some extent, else it can not grow and expand. The soul of one man requires different nourishment from that of another, as our bodies, being differently organized, find nutriment in food which to some would be as poison.

We are as plants which grow in the garden,—some requiring sunshine and light, while others can not bear its heat and brilliancy, and must be nurtured in the shade. Some must have dry soil,—while its neighbor is suffering from thirst and growing in stunted imperfection because of its great need.

Self-want increases with thoughtless self-indulgence, and in the same ratio does it decrease with self-forgetfulness. Let us think, then, of the many ways we can find of doing with what we have—of giving from what we do or may possess. In giving, if we do it with the true spirit, we can never impoverish ourselves, but instead, we shall add to the value of our possessions and to our power of giving by so many fold as the gift is of cost to ourselves.

The gardener knows that by a generous picking of the blossoms as they come forth, there will be fuller and more vigorous growth of others. He does not let the flower wither and die on its stem if the value of the plant depend on its frequency of bloom. And we, for readiness to do good, should waste no time dwelling upon what we have done, but put it behind us, and seek opportunities for further action. In the giving from our surplus of worldly gains in a spirit of freedom and thankfulness that it lies in our power so to be of use in furthering a good work, we do well. A work that shall be of great public benefit is much to be rejoiced in. We trust that all communities may grow great in those institutions which shall be the means of purifying, ennobling, and strengthening the great public soul of the world. There are true, large-souled men and women at work everywhere in this wise, and God will bless their efforts with a rich harvest.

And there are those who have not the power to give help of this nature to their fellow-creatures, but who out of their scanty surplus are helping individuals to a firmer foothold in life, smoothing the rough places for a few, and assisting in the numberless ways unnoticed by the heedless many who pass them without care,—not perhaps unkindly, but simply without care. These do with their smaller means a work which is equally acceptable in the sight of God. Theirs is the true pleasure of giving, yet it is hardly the greatest.

A gift of whatever kind, whether of material worth or spiritual cheer, is greatest in the sight of God when born of sacrifice. He does not measure our gift as does the human eye, and it is only they who seek entire honesty with themselves who can see and judge the purity of their own motive gift.

There are many of us who from simple inertia prefer to live a negative life, seeing as little as they can conveniently of what is going on about them which would incite their consciences to helpful action. They do not wish to take upon themselves any more trouble or pain on account of others than they can help. They do no wrong, according to their own views. They keep the Ten Commandments; are properly shocked at the sins of others, and take care that no such visible

ones appear in themselves; but they never do any good. They forget that it is utterly impossible for a human being to stand still spiritually or intellectually; that we must be growing greater by the use of those talents which God has given us, or by their idleness they must be gathering rust which will in time render them entirely incapable of use.

But we can not, all of us, give of the good things of which we have spoken. Many are struggling hard to get the little that they must have for themselves, and they might naturally think, "There is nothing I can give to others—I have not enough for myself." Yet this is never true. We believe it to be quite impossible for any one to be so situated, if he is surrounded by his fellow-creatures, that there is absolutely *nothing* he can do to be of use to them. It is well to look diligently for what we *may* have by earnest cultivation that will be a help or comfort to others. In the first place, when we have nothing but ourselves to give, we must learn to rely upon ourselves, or rather upon that which is within us from above. A person who thus sustains himself is an unconscious assistance to others. He carries about him a power and strength which few do not recognize and receive pleasure from. With this reliance firmly rooted in our hearts, we are enabled to endure and comparatively forget sorrows which have wrung our souls to their deepest life, because by this suffering we are drawn near to our God and the spirit of Jesus Christ, for which nearness we derive a great and unfailing influx of life and power; and because by the suffering as well as by the forgetfulness of ourselves we are able to give more sympathy and strength to those who are in need of it. We are all ministers each to another, and he is greatest among us who is oftenest of service. Servitude may seem despicable to many, yet he who is the most faithful servant in the work which is put before him, whether humble or great, is he who will receive the Father's "Well done!" and he who finds the greatest number of ways out of his willing heart to serve his fellow-men, receives the fullest portion of blessing. Are we not all unavoidably servants of either the good or bad instincts within us? If of the bad, a sorry subject it will make of us, we may be sure. If of the good, our means of

growing greater and happier are endlessly opening before us.

But if we say to ourselves assuringly—"I wish to follow my good impulses," and yet do not strive earnestly to find out what these are as compared with those which simply seek our own ease, and do harm only in that they do no good, thus dulling our sense of obligation, then do we commit that root of all sin from which may spring every evil thing—self-deceit; then do we blind that "single eye" which filleth the soul with light; then do we in reality seek to become servants of both, and this can not be. One or the other will in time gain the ascendancy, though we can not tell how or at what time.

Every struggle to respond quickly and cheerfully to a warm, helpful impulse opens our eyes to other opportunities, and fills our hearts with a sweet unspoken sense of usefulness. But if instead of this we quiet those impulses, and put them away with excuses which shall allow us to take our ease, then do we become more and more blinded to the wants of others, more and more taken up with our own affairs, and our life, which might become as the garden filled with lovely flowers, shall be as a dull, cheerless plain, from which few will seek or derive pleasure. It shall put forth but little growth; its flowers will be few and slow to blossom, and the sweet, rare fragrance which so delights us, and which is to the flower as the soul is to the body, shall not be found about them to refresh the passer-by.

There is no need to ask, "In what way can we do so much for others?" nor expect to arrange a stated plan of action. If we keep our hearts full of the presence of our God, and of a great unflinching desire to do his work in whatever way he may present it to us, it is wonderful how many ways we shall find,—what a constant demand there will be upon our energies.

Many of us say to ourselves, "If I were in some position better fitted to my capacities, I could become greater and more noble; but it is of no use for me to try to do any good here, where everything goes against me." It is all a mistake; for if our duty still holds us to the place, we shall surely find that the faithful, cheerful performance of it *now* and *here*, will be the best fitting we can possibly have

for that other and greater work when God shall think best to put it within our reach.

This humdrum round of duties, the same from day to day, of household cares, of teaching, buying and selling, writing, or exchanging the everlasting dollar, seems a very narrow life to us sometimes, and we are too apt to think as before that there can be no chance for doing anything great or serviceable to others while engaged in them.

But is it not by being faithful in the minor daily events of life that we gain strength and wisdom for the greater?—and indeed these things are not so little as they seem. We would skip the alphabet and begin at once to read, that we may taste the sweetness of more advanced knowledge. We must begin at the *beginning*; with ourselves not only for our own sakes, but for the sake of our children; and with them also in the beginning, while the soil is fresh and new to receive the seed. Then will the seed spring up more readily than if planted after the soil is hardened by many storms.

Our lives are crowded with little events and duties which seem but trifling when viewed individually; yet as they fill so great a portion of those lives, it must be they—or our performance of them—which constitutes the basis of our character. Thus by attending to the smaller duties do we gain a wider and more thorough knowledge of human life,—for there is greatness and power in small things even as in great,—and we can more readily and acceptably give the sympathy or good cheer, which is often all we can bestow, to the friend who is in trouble. We all love to give. There is almost no one so craven that he finds no happiness in giving of what he can spare. But are we then in its fullest sense cheerful givers?

The rich man gives out of his abundance. He is a great blessing to the community. The well-to-do man gives from his little surplus to aid a neighbor in a quiet way; he gives wisely and well. The man who has no surplus, but in order to give must go without something himself, must make some self-denial—he gives better. And if in doing so he maintains a hearty good cheer which conceals from his neighbor the knowledge of his own sacrifice, then is he in its fullest sense a cheerful giver.

If being wearied in body, or bearing a heavy sorrow in our hearts, we forget ourselves in the labor for another, or in giving sympathy and joy to a heavier heart than our own, then will the after-rest be doubly the peace and stillness of the true Sabbath rest.

There is a constant delight and strength to be found in the presence of such givers which proves the greatness and value of their work by the manifold souls it ministers unto. The ready, cheerful sacrifice of our own wishes to those of others is the true spirit of giving; for a gift has no reflective value to him who bestows it unless given in ready gladness. Jesus said, "Greater love hath no man than this, that a man lay down his life for his friends." This does not imply only that he die for another—or for others. It often requires much greater strength to live, and live well for others, than to die. In God's sight there are more beautiful lives among the quiet, unpretending, faithful workers who do not consider they are doing anything worthy of notice than among the greater and more worldly-wise, who occasionally do a great thing, and a good one in its way, and let the minor matters, so called, slip from their sight.

It is the constant washing of the unceasing waters that wears the pebble to such smooth and rounded perfection, not one great, overwhelming storm with its mighty rush of tempest.

MANNERS IN THE PULPIT.

THE *Methodist Monthly* publishes these hints to preachers. The following twelve hints to "young" preachers are suggested by one who has been a close observer of preachers' habits in the pulpit. We commend them to our ministerial brethren.

1. When you enter the pulpit it looks preacher like, and indicates dependence on God, to kneel reverently before Him, and pray to Him that heareth in secret, that He may reward you openly in your sermon.

2. If a brother preacher is in the pulpit with you, do not engage him in conversation any further that may be strictly necessary. Your auditors might think your message to them was not bearing with much weight on your own heart.

3. When you desire the people to kneel for public prayer, do not throw up your hands and arms as though you hurt somebody. It would seem more appropriate to say, "Let us pray," and make no gesture with arms and hands.

4. Read your text distinctly, and do not say, "You can find the text by reference to the twentieth verse and fifth chapter of the Gospel according to St. Matthew;" but say, "Matthew, fifth chapter and twentieth verse." Everybody knows that Matthew is a saint, and that the book which bears his name is a gospel, that Hebrews was written by Paul, and that it is an epistle. Why, then, repeat it every time you announce your text?

5. Do not close the Bible after reading your text, but let it remain open before you during the sermon. To close it indicates a little egotism, and seems to say, "I don't need you any longer."

6. Avoid extremes in gesture. Do not be too stiff on the one hand nor like a limber jack on the other; and remember that gestures are to be seen, not heard.

7. Do not try to tell all you know in one sermon. The art of condensing costs study, but when once attained its value is priceless. Never talk to hear yourself; if you do, others will get tired.

8. Avoid levity in the pulpit. Once in a while something may be said to excite a smile, but let it be the exception. A common buffoon can make people laugh.

9. Be natural. Don't try to ape the tone or gestures of some great man. Be great by being yourself. Guard against what is termed "heavenly tones," a tremulous voice, and "ministerial twang."

10. Be in earnest. Let your hearers see that you believe what you are preaching. How can any preacher go with God's awful message to dying men and women with feelings of indifference! How dare he trifle away the sacred hour on some dry metaphysical disquisition in which his own heart never becomes enlisted!

11. Articulate plainly. Let every word be heard from the number of the first hymn to the Amen of the benediction. [This you can not do with tobacco in your mouth.]

12. Above all, and first of all, seek the baptism of the Holy Ghost.

[We would add one or two other "hints," which it may be useful to observe. The spirit of the pulpit should be high, holy, Godlike, and not combative, revengeful, or too "scary." Fear may be appealed to occasionally; but love is more potent to move and soften the hearts of sinners. A clergyman with very large Cautiousness and little Hope will picture one's future in colors dismal and dreadful. Fear is a good thing, but don't use too much of it. One with large Hope and less Cautiousness will try to influence his hearers to look upward. Heaven is sometimes pictured as a *place*,—not always as a *condition*,—in which every conceivable luxury will be ours, *providing*

we observe all the requirements. Clergymen with large Self-Esteem sometimes forget that it is the Gospel they are expected to preach, and unconsciously—let us suppose—preach *themselves*. "I did so and so," "I am your guide," etc. This is also seen in those with small Veneration and large Approbativeness. The minister's calling, which is justly regarded as the highest of all human pursuits, requires the best organization, the best culture, and the best spirit to do it in the best way. We have bunglers and impostors in the pulpit as well as elsewhere; still, here, much more than elsewhere, we should *seek* to "put the right man in the right place."]

CONTRADICTION.

BY ANNIE L. MUZZEY.

Is this the old life wailed in verse, and told in mournful story,

So full of pains and crosses, so black with woe and sin?
Why, it is God-descended, and it leads straight up to glory,
And blessed is the soul that hath a lot and part therein!

Is this the world we hear of, where 'tis always stormy weather, [the land?

And the weak go to the wall, and the strong possess
Why, it is a vast seed-field, and we sow and reap together,
And weak and strong may each enjoy the labor of his hand.

Is this the God who sits on high and watches but to render [those who fall?

The judgments that are due to those who stand and
Why, we lean upon His bosom, and we feel His heart-throbs tender,

And He bears us in His arms, and His care is over all!

Are these the saints and angels who revolve with heads low bended [the Lamb?

Around the Great White Throne chanting praises to
Why, they are in our midst, and our lives are closely blended,

And they praise their King with works, not with waving boughs of palm.

Are these the men and women selfish, cruel, and false dealing,

And swift to snatch advantage of another's pressing needs?

Why, they are kindly-hearted, with unfathomed depths of feeling,

That stirred by real misfortunes overflow in loving deeds.

Oh, life with hidden meanings! oh, world with wide, fair places!

Oh, God so close and tender! oh, saints with helping hands!

Oh, men and women erring, yet with undeveloped graces,
Lying in still repression like babes in swaddling bands!

We are climbing all together up the stairway of the ages,
Grasping at things unseen and but vaguely understood;
But the Almighty, wiser than philosophers and sages,

From our crossed and crazed endeavors knoweth how to bring forth good.

And this fateful moment flying is a fetter fastly linking
The life we partly know with the life we do not see,

And the deed that we are doing, and the thought that we are thinking,

Will face us with its issues in the long eternity.

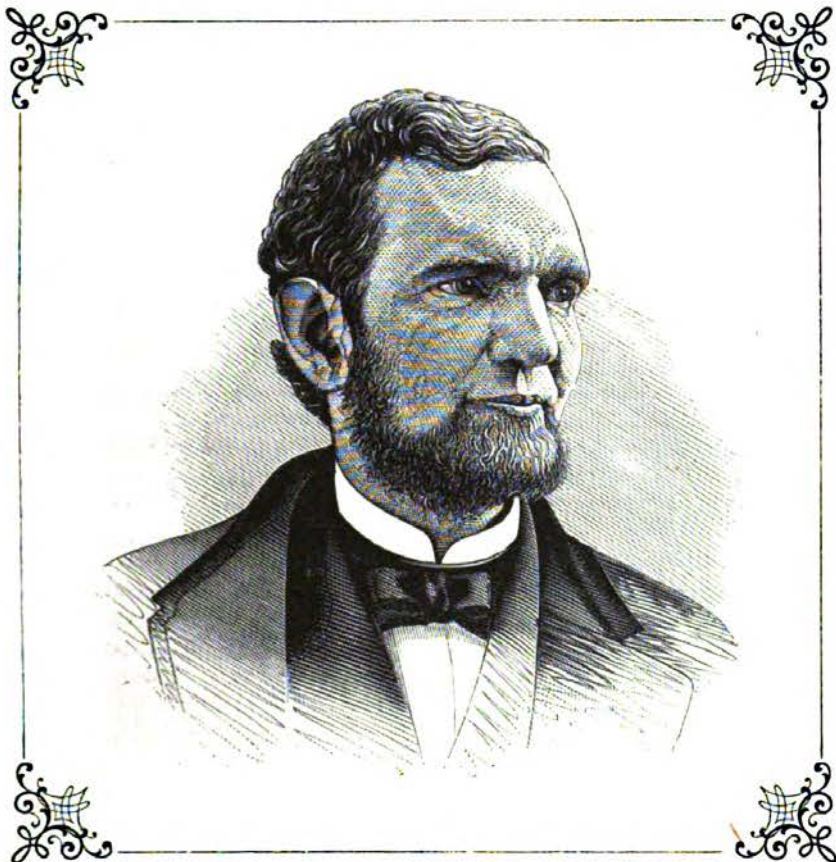
JOSEPH P. THOMPSON, D.D.

OUR distinguished subject is a very remarkable man, remarkable in contour or physiognomical make-up, and also for his varied acquirements and real knowledge. Our portrait is but a faint resemblance to the original, and comes far short of doing him justice. Indeed, one must look at his features when animated, alive, ablaze with thought and

emotion, to have anything like a realizing sense of their mobility, power, and impressiveness. Dr. Thompson stands six feet high, and when in good condition weighs about 170 pounds. He is straight; has a quick and elastic step; his movements are graceful, and he has a magnetic touch, with an attractive presence. His brain is large, exceeding twenty-three

inches in circumference, though not disproportioned to his body, which is considerably above the average. He has large Self-Esteem, Firmness, Combative-ness, Approbateness, Conscientiousness, Hope, Spirituality, Benevolence, and Veneration. His Causality and Comparison are also large, but subordinate to his immense perceptive faculties,

lations of the one to the other, and their harmony. His religion is broad and liberal, and if life and health be spared to him he will, we venture to predict, develop in science and philosophy such ideas as will tend to elevate man and his religious nature above the sectarian narrowness, rancor, and intolerance which now pervade the people, the pulpit, and



PORTRAIT OF JOSEPH P. THOMPSON, D.D.

which give him almost unequalled powers of observation, criticism, and analysis. He has developed his mental powers in accordance with his organization. While theology was one of his first and most interesting studies, the natural sciences early attracted his attention, and he stands forth to-day a foremost man as an expounder and defender of real science and of divine revelation. He has been most successful in showing the re-

the press. Dr. Thompson is a natural captain. Instead of following others, he takes the lead, and with that dignity and authority which a true manliness, a knowledge of men and things give to him, he leads off with all the assurance that the truth can give. Nor will he mislead.

The following sketch gives only an outline history of this comparatively young American philosopher and divine:

JOSEPH PARRISH THOMPSON was born in Philadelphia on the 7th of August, 1819. Received his collegiate education at Yale, from which institution he was graduated in 1838, and subsequently pursued a course of theological study at the seminaries of Andover and New Haven.

In October, 1840, he became pastor of the Chapel Street Church in New Haven, Conn., and in April, 1845, was called to the Broadway Tabernacle Church in New York.

The effort to establish this the first church of the Congregational order in New York was attended with much social and sectarian opposition for several years, and at the time of Dr. Thompson's acceptance of the call the society had not altogether emerged from a condition of embarrassment. The new minister, although but a young man of twenty-six, entered heartily into the work of building up the church, and exhibited a wealth of energy and sound practical judgment which made him soon felt as a most powerful auxiliary toward success. The old Broadway Tabernacle was purchased in the outset of the new ministry and at the urgency of Dr. Thompson, and proved a valuable investment in a pecuniary way, when the encroachments of business and the numerous removals of members of the congregation rendered it necessary to change the site of the church building.

He originated the well-known weekly paper, *The Independent*, and for twelve years was its principal editor, with Rev. Drs. Leonard Bacon, R. S. Storrs, and Joshua Leavitt as associates. He early took an active part in the anti-slavery movement from the religious point of view, and endeavored to bring the churches up to the standard of opposition to slavery on moral grounds. He became especially conspicuous in this movement by his opposition to the Fugitive-slave law, and drew upon himself a violent controversy with the press generally, and to some extent with the pulpit, by asserting that such a law could not be binding on the conscience, and therefore had no valid authority over the fugitive.

He was the prime mover in bringing about the first great Congregational Convention held in 1851 at Albany, and which brought the churches from the East and the West together.

In 1859 the Tabernacle Church was removed to its present site, on the corner of Thirty-fourth Street and Sixth Avenue, where a handsome edifice was erected. During the war Dr. Thompson's congregation exhibited a very earnest and zealous part in upholding the

Government, and at one time raised \$30,000 on a single Sunday for equipping a regiment.

He has always taken a great interest in the relations of science and religion, and has been a vice-president of the American Geographical Society for many years, besides president of the Palestine Exploration Society, and an active member of the Oriental Society. His private studies have been particularly devoted to Egyptology; and having recently resigned his charge on account of impaired health, he hopes to complete those studies in Germany, and produce some works in that department of ancient learning. As an author he is known for several volumes, among which are "Man in Genesis and Geology," "The Theology of Christ," "The Memoirs of David Hale, and of David T. Stoddard, the Missionary," "The Christian Graces," and "Love and Penalty." Several of his orations and occasional discourses have been published also, the principal of which are "Christianity and Emancipation," "How to Build a Nation," "Revolution against Free Government a Crime." During the war the Union League Club Society and the Loyal Publication published several of his addresses for general circulation.

Two sons of Dr. Thompson enlisted in the army, one of whom died in the Shenandoah Valley, and has become widely known through a little book, "The Sergeant's Memorial."

In the latter part of October Dr. Thompson, to the great regret of his large and prosperous congregation, resigned his charge. His reasons for this somewhat unexpected step are definitely stated in his letter of resignation, from which we take the following manly declaration:

"Sudden as this announcement may be to you, with me this is no sudden decision. More than three years ago, a physical infirmity, induced by exposure in the army, and in its nature beyond remedy, had become so aggravated and so complicated, that the highest medical authority ordered me to withdraw from the pressure of public responsibilities, if I would save my life. I should then have done so, had not a sense of honor, in view of your recent indulgence and liberality in sending me abroad, and certain cherished projects for the welfare of the church, restrained me. I therefore chose to endure in silence what it could not profit any one to know. But I can no longer hope to satisfy my conscience in the discharge of my duties as a pastor, when life is a constant care and an almost constant pain; and when symptoms not to be mistaken threaten, if not the seat of life, what to me is more serious, the seat of

thought. And what I feel I can not do, I would not attempt to do; for I would not become a drag upon the church which God once appointed me to lead, nor a pensioner upon its bounty. Having worked with you in the energy of my youth, and again in the vigor of my prime, to free this church from debt, I could not endure the thought that through premature infirmity I might become a burden upon its treasury in my advancing years. I therefore

retire with unquestioning acquiescence in the same Divine call by which I came."

Shortly after this retirement, Dr. Thompson sailed for Europe, where after a respite for the recuperation of his health he will proceed to the East. He goes with the most cordial wishes and practical support of his many friends; and should his health favor, we doubt not that his investigations will result in valuable additions to our store of Oriental learning.

Physiognomy, or Signs of Character.

Of the soul, the body form doth take,
For soul is form, and doth the body make.—*Spenser.*

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

COMPARISON OF ANCIENT AND MODERN ART —STUDIES OF THE ITALIAN MASTERS.

IT is not an easy task to reconcile two subjects so far apart in the minds of most readers as anatomy and the fine arts; but if prejudices, early imbibed, be thrown off, it will be found that there is no science, taken in a comprehensive sense, more fruitful of instruction, or leading to more interesting subjects of inquiry, than the knowledge of the animal body.

The academies of Europe, instituted for the improvement of painting, stop short of the science of anatomy, which is so well suited to enlarge the mind, and to train the eye for observing the forms of nature; or if they enforce the study at all, it is only in its more obvious application, that of assisting the drawing of the human figure. But my design in this volume goes farther: I purpose to direct attention to the characteristic forms of man and brutes by an inquiry into the natural functions, with a view to comprehend the *rationale* of those changes in the countenance and figure which are indicative of passion.

A just feeling in the fine arts is an elegant acquirement, and capable of cultivation. Drawing is necessary to many pursuits and useful arts: Locke has included it among the accomplishments becoming a gentleman, and, we may add, it is much more useful to the artisan. Good taste and execution in design are necessary to manufactures; and conse-

quently they contribute to the resources of a country.

I am not without hope that a new impulse may be given to the cultivation of the fine arts, by explaining their relation to the natural history of man and animals, and by showing how a knowledge of outward form, and the accuracy of drawing which is a consequence of it, are related to the interior structure and functions.

Anatomy, in its relation to the arts of design, is, in truth, the grammar of that language in which they address us. The expressions, attitudes, and movements of the human figure are the characters of this language, adapted to convey the effect of historical narration, as well as to show the working of human passion, and to give the most striking and lively indications of intellectual power and energy.

The art of the painter, considered with a view to these interesting representations, assumes a high character. Every lesser embellishment and minuteness of detail is regarded by an artist who has those more enlarged views of his profession as foreign to the main design, distracting and hurtful to the grand effect, admired only as accurate imitations, almost appearing to be what they are not. This distinction must be felt, or we shall never see the grand style in painting receive that encouragement which results from public feeling and good taste. The painter must not be satisfied to copy and represent what

he sees; he must cultivate his talent of imitation merely as bestowing those facilities which are to give scope to the exertions of his genius; as the instruments and means only which he is to employ for communicating his thoughts, and presenting to others the creations of his fancy; it is by his creative powers alone that he can become truly a painter; and for these he is to trust to original genius, cultivated and enriched by a constant observation of nature. Till he has acquired a poet's eye for nature, and can seize with intuitive quickness the appearances of passion, and all the effects produced upon the body by the operations of the mind, he has not raised himself above the mechanism of his art, nor does he rank with the poet or historian.

It is a happy characteristic of the present times, that a love of the fine arts is becoming more and more prevalent among the affluent; but still, rich furniture, mere ornamental painting and gilding, usurp the place of art properly so called. The mansion of an English nobleman and that of a Roman of the same rank present a singular contrast. The former exhibits carpets, silk hangings, lamps, mirrors, china, and perhaps books. The palazzo, on the other hand, in its general aspect, may betray antiquity and decay; yet respect for ancestry retains on its walls the proofs of former grandeur and taste; *there* hang many pictures, each of which would purchase an English villa or furnish a London mansion in all the extravagance of fashion. Vulgar curiosity may seek admittance to the finery of the one, while princes are gratified by admission to the other.

Original genius seems peculiarly necessary to excellence in design. Good taste may be acquired by familiarity with statues and paintings, and by the conversation of the ingenious; but the power of execution depends on deeper sources. In reading Vasari, we are struck by the difficulties with which the famous painters had to struggle. There is hardly one of them who had not to combat parental authority before obtaining leave to give up his days to painting; nor is it surprising that there should be an unwillingness to permit a youth to dedicate his life to an art so little gainful, where extraordinary excellence alone obtains notice, and hardly ever

an adequate reward. I speak of the higher department of art.

Much has been done at home by the force of genius alone. Our native artists have vindicated us from the aspersion of Winckelman, that genius for the fine arts is stunted in these northern climes,—a notion which has so extensively prevailed, as even to have influenced our own Milton:

"Unless an age too late, or cold
Climate, or years, damp my intended wing."

Winckelman, in his history of ancient art, seems to attribute all to climate; not only the perfection of form of the inhabitants of Greece, but their serenity of mind, sweetness, and love of beauty. Such a theory would imply that the people of Sparta and Athens must have had the same qualities. But when Sparta triumphed, it was in pride and rapacity; neither the general intercourse between nations, nor commerce, nor intellectual nor moral excellence, derived any benefit from her ascendancy.* Athens has been the mistress of the world, leaving the examples of the greatest virtues and excellence in philosophy, eloquence, poetry, and art; yet she has also left humiliating instances of tyranny, cruelty, and blood. The history of Greece is the record of incessant wars, where towns were sacked and citizens inhumanly massacred; and in Athens, war was always justified if it promised advantage. When tried by misfortune, she was found wanting: during pestilence, every affection was blunted; and licentiousness abounded to such a degree, that history informs us the people became brutalized. It is strange that Winckelman should give so much to the influence of climate, seeing that where the olive still ripens, in the long summers of Greece, there exist not a vestige of those virtues which were the admiration of the world; and centuries have passed without a poet or philosopher appearing in the country of Homer and Plato.

In the soil and climate of Italy there have existed together states of society the most dissimilar. The arts and civilization of Egypt and Phœnicia had taken root among the Etruscans, and the cities of Central Italy had made a great advance in civilization, and certainly in the arts, when Rome arose to

* Arnold's "History of Rome."

crush them.* Her policy, and the leaning of her most virtuous citizens, were adverse to the arts. They feared that while they refined, they should soften away those rugged and sterner qualities of the Roman soldiers which were bestowing on them the empire of the world. But the old virtues at length declined, and the Romans came to covet the luxuries of conquered nations, whom they could not rival in refinement or the arts; so that Rome became the center and the common receptacle of the spoils of Egypt, Greece, and Italy.

The inquiry into the effects of climate were an idle one, if it did not lead to the conviction, that institutions, much more than climate, influence the faculties of man. Indolence steals upon communities as well as individuals. In the same regions, and in the same climate, the inhabitants are at one time overwhelmed in ignorance and superstition, and at another, elevated to the most admired intellectual exertions. When the energies of a people are roused, there is an improvement in the arts of peace, however gloomy and foreboding the struggle may at first appear. The mind excited by public events does not subside into indolence. In Athens the struggle for power, and the desire of independence, forced the highest talents to the highest station.† It was during the contests of the free states of Italy that the arts revived.

* A more just estimate is now made than formerly of the early Romans, and of the virtues of the surrounding tribes. (Dr. Arnold's "History of Rome.") The remains discovered in the tombs of Tarquinii, Tuscania, Argyllæ, Veii, and Clusium leave no doubt of the high advancement of art in these cities, centuries before the foundation of Rome—at least of its fabled rise under Romulus. These cities were the adversaries of the early Romans; and, though subdued, furnished to their masters the elements of government and of civil policy. Rome had conquered the surrounding states, and sought to blot out all memory of them; when new settlements of Greeks (giving name to the district of *Magna Græcia*) again offered to her a more extended field of enterprise, in which the arts of peace were once more subjugated under her iron sway.

† If I did not believe that Providence rules in the march of nations, I should say that the world would have more rapidly advanced in philosophy, literature, and art, but for that stern, remorseless people, obstinate against instruction. We are biased in favor of Rome from her language containing the only record of much that, but for her conquests, would have earlier, and with happier influence, spread over the western world.

† See Roscoe's introductory chapter to the "Life of Lorenzo di Medici."

Perhaps we should attribute the cultivation of literature and the arts in Italy more to the smallness of the states than to the forms of their governments, for these were of every kind. While in Rome the Pope was an absolute sovereign, in Venice the nobility had raised an oligarchic authority on the necks of the people; and both were distinguished from the democratic turbulence of Florence.

In the great kingdoms of modern Europe, princes are surrounded by a dense body of courtiers, political agents, and soldiers, numerous and clamorous in proportion to the offices of command and places to be bestowed. All who are distinguished by excellence in liberal studies are jostled aside, and the prince knows little of men of genius, far less does he think of making them friends. But in the smaller states of Italy, princes sought the acquaintance of men remarkable for their talents, for the cultivation of philosophy, of the language of Greece, or of ancient Rome, for the improvement of their native Italian, and of poetry, or of the fine arts; and it is pleasant to notice how easily the presence or absence of such men affected the splendor of the court. Amid the more than barbaric magnificence and riches of modern courts, certainly of our own, the exit or entrance of such men would be unmarked.

Perhaps the circumstance that all negotiations were formerly conducted in Latin, and the consequent necessity for courtiers being acquainted with the learned languages, gave a liberal tone to the men of influence in the several states, and a disposition to promote literature and science.

Some authors have attributed the genius of the Greeks, and their love of philosophy and art, to the conformation of the brain,—to the form of the skull! [It is not the skull that influences or gives direction to the mind; but it is the MIND which gives shape to the brain and to the skull. The skull is the servant of the brain, as the brain is the servant of the mind. *Example*—If one indulge lustful thoughts, or thoughts of theft, malice, or revenge, more blood will be sent to the particular organs of the brain through which these passions are manifested, and they become enlarged thereby, and the skull changes accordingly.] On this subject I may have occasion to touch hereafter. But does

not history determine the question? The Greeks were not extirpated by the Roman conquests. During all the period of the Byzantine Empire, between the reigns of Constantine and Palæologus, luxury, sloth, and effeminacy prevailed, while the people of the west of Europe were rising in moral and intellectual energy, and in the cultivation of the mind.*

During the latter periods of ancient Rome, a fashion arose which conduced much to the advancement of art, and filled the city with its thousand statues. The Romans, like the Greeks, sought a species of immortality by the erection of their busts and statues; they consecrated their friends by setting up their busts in their temples. These being given in honor of the divinity whom they worshiped, were preserved, even when the personages they represented had incurred the odium of the people, and when their statues placed in public were cast down. This desire of obtaining the busts of illustrious men † explains the reason of the multitude of those found collected in the Vatican: they are chiefly in marble; for the statues and busts in bronze and other metals tempted the cupidity of men in the middle ages, and were melted down. We are struck, too, with the number of the busts of celebrated men in proportion to those of princes, which Visconti believes to have been owing to the desire which, in the better ages both of Greece and Rome, prevailed among private citizens to have them copied, as appropriate ornaments for their libraries, porticoes, and gardens.

The remains of antiquity in Italy, the presence, though in ruins, of temples, statues, sarcophagi, altars, and relievos, account for the early revival of art in that country. These must have been the studies of Donatello ‡ and Ghiberti, as afterward of Buona-

* See Prichard's "Physical History of Man." He justly controverts the idea of Blumenbach.

† On this subject, see the preface to Visconti's "Iconographie."

‡ If all the great works of Grecian art had been at once disclosed, it might not have produced the happy effect of the successive exhumation of the splendid works of antiquity; the excitement or, as Cicognara has expressed it, "un certo fermento," kept up by the contest of princes for these works of art, gave importance to all who sought to imitate them, and raised them in the estimation of even the most vulgar minds. The progress in the history of art seems to have been—First,

rotti; for sculpture led the way to painting. Our countrymen, pursuing their studies there, are placed under similar influences, and give proof that it is neither genius nor devotion to the imitative arts which is wanting in the north. But the time is past when the people knelt down before the works of a sculptor's hands; when the Amphictyons, the council of all Greece, gave him solemn thanks, and assigned him a dwelling at the public expense in every city!*

It is in vain that we dream of equaling the great works of antiquity; they were raised under tyranny and false religions. We must hope for excellence, in a different condition, as the fruit of a religion of love, joy, and peace. If the arts of design bear no relation to that which has the greatest influence on mankind; if they stand related neither to religion, nor to the records of history, nor to the progress of empire,—they must be ever, as a dead language, associated with ancient times; and with us, nothing more than a handmaid to domestic ornament and individual refinement and enjoyment.

Our artists should be brought to consider the changed frame of society. No one in these modern times, however much he may deserve the gratitude of mankind, is exalted, as they would desire to see the proficient in art. The young artists madden themselves by the contemplation of antiquity, which leads to disappointment and repining age. The last conversation I had with Flaxman, whose genius was better estimated abroad than at home, was while the old man was elevated on a great block of marble, in his studio (*Anglice*, a shed). "Ay," says he, "we shall see what is thought of these things two hundred years hence." Yes, but they will

the establishment of new families; then, the erection of splendid palaces and the necessity or convenience of digging for materials in the foundation of ancient buildings; next, the exhumation of fine statues, and the emulation thence arising; lastly, the desire of having professors and universities arose, and this took place at a time when the pontiffs were banished from Rome.

* Tiraboschi refers to an ancient chronicle regarding the Dominican church of Reggio, erected in 1233, for an example of the enthusiasm under which great edifices were built, and where all grades of society wrought as common laborers, like emmets in an ant-hill. "Tam parvi, quam magni, tam nobiles, quam pedites, tam rustici, quam cives, ferebant lapides, sablonem, et calcinam, supra dorsum eorum . . . et beatus ille qui plus portare poterat," etc.

have the record of these things in stereotype, not in marble. Printing banished sculpture, and no man now, or hereafter, in addressing the people, will, like Fabius Maximus or Scipio, point to the statues of his ancestors.

Without cherishing vain regrets, there is a source of infinite delight in art, even as cultivated among us; and we may hold the remains of antiquity as superlative models. Gods and goddesses we shall not again see in marble, but the human figure in its perfection we certainly may. The Greeks gave prizes for excelling beauty. Among them a youth might be celebrated for the perfection of his eyebrow; and the proportions of an Aspasia were transferred to the statue of a goddess. The forms of strength and the proportions of the victor in the games were scientifically noted and recorded, whether it was for wrestling, running, or pitching the discus. Here, then, were studies for the sculptor, and a public to judge of the perfection of his work. Our connoisseurs never see the naked figure, or, if they do, it is an academy figure,—probably some hired artisan, with his muscles unequally developed by the labor of his trade,—pale and shivering, and offering none of those fine carnations which more constant exposure gives to the body, as we see in the face, nor having that elegant freedom of limb, which youth, under a genial climate and the various exercises of the gymnasium, acquired.*

For the improvement of art, there must be a feeling in the public in correspondence with the artist's aspirations.† In visiting the Sistine Chapel, I said to the celebrated artist who accompanied me, "How could Michael Angelo venture to do such things? Were such a man to arise among us, he would meet with ridicule, or live in neglect." But my friend said, "Do you not remember the impatience of Julius to see these paintings during their execution? For Michael Angelo being unwilling to let his unfinished work be seen, the Pope threatened to break down the whole scaffolding on which the painting was raised." It was by such enthusiasm, and the

consequent encouragement of art, that Julius has justly participated in the fame of those who made his days an era in the world.

It is, perhaps, favorable to painting, that it has not to contend with the excellence of antiquity. In visiting the schools of Florence and Bologna, and the galleries of the Vatican, we can trace the successive works of the early painters and the progress of modern painting. In the commencement, the subjects are such as could only be suggested by monkish superstition and enthusiasm. They are the representations of the wasted figures of anchorites, or if of women, they are suffering martyrdom. Even the Saviour, represented so full of beauty in after-time, is painted from the dead of the lazaret-house or hospital. The purpose must have been to subdue the mind.* With better times the influence of the Church was more happily exercised, and finer feelings prevailed. The subjects were from the Scriptures, and noble efforts were made, attesting a deep feeling of every condition of humanity. What we see in the churches of Italy, and almost in every church, is the representation of innocence and tenderness in the

Athens, and while they remained in his court-yard in Piccadilly, he proposed a great treat to his friends. He had entertained an ingenious notion that, by exposing the natural figures of some of our modern athletes in contrast with the marbles, the perfection of the antique would be felt, and that we should see that the sculptors of the best time of Greece did not deviate from nature. The noblemen and gentlemen whom he conceived would take an interest in this display were invited. He had the boxers, the choice men of what is termed "the fancy." They stripped and sparred before the ancient statues, and for one instant it was a very fine exhibition; but no sooner was the bulky form of Jackson, no longer young, opposed to the fine elastic figure of the champion of all England, than a cry arose, and "the ring" pressed forward, and ancient art and the works of Phidias were forgotten. Such I fear is the feeling of even the better part of the English public. Let not the young sculptor be too sanguine of support.

* In the old library in Basle there is a remarkable painting of Christ by the younger Holbein. The painter must have been where anatomy was to be learned; for I am much mistaken if he has not painted from the dead body in an hospital. It is horribly true. "There is here the true color of the dead body. (The Italian painters generally paint the dead of an ivory white.) Here is the rigid, stringy appearance of the muscles about the knee. The wounds where the nails have penetrated, the hands and feet are dark red, with extravasation round the wound, and the hand itself of the livid color of mortification. The eyes, too, show from whence he drew; the eyelids are open, the pupils raised, and a little turned out. Holbein born here in 1489."—*Note from Journal.*

* So conscious were some of the Grecian states of the advantages derived from exercise, that they denied them to their slaves.

† I can not withhold the following instance of public feeling in England: When Lord Elgin brought to London the figures of the beautiful frieze from the Parthenon of

Madonna and Child, and in the young St. John. Contrasted with the truth, and beauty, and innocence of the Virgin, there is the mature beauty and abandonment of the Magdalen. In the dead Christ, in the swooning of the Mother of the Saviour, and in the Marys, there is the utmost scope for the genius of the painter. We see there, also, the grave character of mature years in the Prophets and Evangelists, and the grandeur of expression in Moses. In short, we have the whole range of human character and expression, from the divine loveliness and purity of the Infant Saviour, of angels and saints, to the strength, fierceness, and brutality of the executioners. There, also, we may see the effort made, the greatest of all, in imitation of the ancients, to infuse divinity into the human beauty of that countenance, which, though not without feeling, was superior to passion, and in which benevolence was to be represented unclouded by human infirmity. These were the subjects to call forth the exertions of genius, while the rewards were the riches of the church, and the public exhibition, in unison with the deep feelings of the people. Thus did religion at a later period tend to restore what it had almost destroyed on the overthrow of Pagan idolatry. For the new-born zeal of the first Christians sought to efface every monument of the antique religion, throwing down the statues, destroying the mosaics and pictures, effacing every memorial, and razing the ancient temples, or converting them into Christian churches.

The Church of Rome has favored the arts in a remarkable manner. The ceremonial and decorations of the altar have been contrived with great felicity. He is insensible to beauty who, being a painter, does not there catch ideas of light and shade and color. The Gothic or rich Roman architecture, the carved screen, the statues softened by a subdued light, form altogether a magnificent scene. The effects of light and color are not matters of accident. The painted glass of the high window represents to the superficial observer no more than the rich garments of the figures painted there. But the combination of colors evinces science; the yellows and greens, in due proportion with the crimsons and blues throw beams of

an autumnal tint among the shafts and pillars, and color the volumes of rising incense. The officials of the altar, the priests in rich vestments, borrowed from the Levites under the old law, are somewhat removed from the spectator and obscured by the smoke of the incense.* The young men flinging the silver censers, in themselves beautiful, and making the volumes of incense rise, give the effect of a tableau, defying imitation; for where can there be such a combination to the eye, joined to the emotions inspired by the pealing organ, the deep chant, and the response of the youthful choristers, whose voices seem to come from the vaulted roof? There is something, too, in the belief that the chant of the psalms is the early Jewish measure.

It was scarcely possible, during the struggles of the Reformation, to keep the middle course; and in rejecting the corrupt and superstitious parts of its ceremonial, to retain the better part of the Roman Church. Enthusiasm would have the recesses of each man's breast to be the only sanctuary; that, even while on earth, and burdened with the weakness, and subject to the influences, of an earth-born creature, he should attain that state of purity and holiness, when, as in the Apocalypse, there is "no temple." Philosophy came to countenance the poverty and the meanness of our places of public worship. Climate, it was inferred, influenced the genius of a people and, therefore, their government and mode of worship. The offices of religion in hot climates were said to require some sensible object before the eyes, and hence the veneration paid to statues and paintings, while in colder climes we were to substitute internal contemplation and the exercise of reason for passion.†

* If the painter requires to know these vestments, he will find an account of them in Eustace's "Classical Tour through Italy," vol. ii. Antiquity characterizes everything in the Roman Church; and to the English traveler this affords additional interest. The ceremonies are ancient; the language of the service is that which prevailed at the period of the introduction of Christianity; the vestments are Jewish—at all events very ancient and majestic. Like everything else in painting, the artist should know the origin and uses of the drapery, or his lines and folds will be unmeaning.—See *Preface to Vasari*.

† Some such thoughts must have come early into my mind, in trying my pencil on the ruins of an ancient abbey; and when, afterwards within the *kirk*, I looked to the rafters, as of a barn, and saw the swallow flying about during divine service.

We trust, or hope, that in the breasts of those who fill the family pew, in these northern churches, there may be more genuine devotion; but to appearance all is pale and cold: while to the subject we are now considering, at least, no aid is afforded. What a contrast is offered to the eye of the painter by the figures seen in the churches of the Roman Catholic countries of the south, as compared with those in our own! There are seen men in the remote aisles or chapels, cast down in prayer, and abandoned to their feelings with that unrestrained expression which belongs to the Italian from his infancy; and even the beggars who creep about the porches of the churches are like nothing we see nearer home. In them we recognize the figures familiar to us in the paintings of the great masters. In visiting the church of the *Annunziata* in Genoa, I found a beggar lying in my way, the precise figure of the lame man in the cartoon of Raphael. He lay extended at full length upon the steps, crawling with the aid of a short crutch, on which he rested with both his hands. In Roman Catholic countries the church-door is open, and a heavy curtain excludes the light and heat; and there lie about those figures in rags, singularly picturesque.

In short, the priests in their rich habiliments, studiously arranged for effect,—the costume of the monks of the order of St. Francis and the Capuchins,—the men and

women from the country, and the mendicants prostrate in the churches, and in circumstances as to light and shade and color, nowhere else to be seen,—have been, and are, the studies of the Italian painters.

Again, in passing from the galleries of Rome to the country and villages around, we can not doubt where Raphael and Dominichino found their studies and prettiest models. The holiday dress of the young women in the villages is the same with that which we see in their paintings; and as each village has something distinguishing and characteristic, and still picturesque in its costume, much is left for good taste to select and combine.

When a man of genius, nurtured in his art at Rome, where everything conspires to make him value his occupations, returns home to comparative neglect, he is not to be envied. He wants sympathy and associates. David Allan, the Scottish Hogarth,* in a letter to Gavin Hamilton, whom he had left in Rome, laments the want of living models, and the defective sensibility of his countrymen. He says, we rarely see in this country a countenance like that of a Franciscan or an Italian beggar, so full of character, so useful to the study of history painting. But, he adds, we have nature, and with the assistance of ancient models and casts of the Greek statues, much may be accomplished.

[TO BE CONTINUED.]

"SOL" SMITH RUSSELL, OR SOME STUDIES IN FACIAL EXPRESSION.

"Look on this picture, and then on that."

IN the broad domain of art one of the strongest testimonials which may be proffered in support of the science of Physiognomy is that found in the impersonations of the mimic. Were it not for the application of this or that representation made immediately by the spectator, the actor's occupation would be gone, for it is in the relation subsisting between feature and disposition, attitude and character, that the universal interest of mankind in the stage, under one form or another, chiefly consists. The men and women who elicit the most popular applause in theatrical performances are those possessing the most capacity for exhibiting

different phases of character. In this department the names of Garrick, Kemble, Macready, Rachel, Siddons, and Cushman have attained a lasting celebrity.

Most theatrical performers, however, owe the facial expression which is suited to the part they would perform, to the use of paints and apparatus; but now and then there appears one who is remarkable, not so much for elocutionary power and effective gesture as for mobility of feature, and the rapid trans-

* See his beautiful edition of the "Gentle Shepherd." While a child, I remember him as a kind and somewhat facetious old gentleman, but chiefly because he gave me drawings to copy and called me "Brother Brush."

itions of countenance which he may exhibit are almost incredible. To be sure, Physiognomy rests its claims upon the close association of feature to peculiarity of character, urging that in accordance with the tenden-



FIG. 1.

cies and mental developments, the different features of the face and the general outline and movements of body are formed. Though one may possess wonderful ability in the line



FIG. 2.

of mimicry, yet it must be admitted that he, too, possesses his peculiar characteristics; and it is known at once by all who associate with

him whether or not he is acting at any time a real or a feigned part.

Within the past few years several persons have appeared before the public to challenge their admiration or wonder by exhibitions of facial gymnastics. We have had occasion to speak of two or three of these in the JOUR-



FIG. 3.

NAL. Probably the name of Burnett has not altogether faded from the memory of the reader. At this time we have to show up another candidate for eminence in this line, Mr. Russell, whose portrait, as he appears when himself, is given on the opposite page.



FIG. 4.

As is very evident in that, although by no means a close likeness, Mr. Russell is a young man of fine organization. His tem-

perament is of the delicate, active, susceptible sort, generally expressive of mobility, sprightliness, and inspiration. There is little of irritability about it, on account of the general harmony of his mental development. The moral region is well filled out, and the indications of ability in contrivance, especially the higher or imaginative order of contrivance, are striking. Temperamentally and organically, Mr. Russell is a great deal of the

impositions, insisting that all the world is leagued to tease and perplex him. He is a veritable thorn in the side of all those with whom he may be associated. This character is most admirably exhibited by Mr. Russell, and its effect upon a large audience can not be described. There are transitions of expression associated with his verbal delineation of the character which are irresistible to one of risible tendencies.



PORTRAIT OF "SOL" SMITH RUSSELL.

artist; the brief sketch of his career, given farther on, abundantly sustains this.

If we turn now to the delineative portraits which we have grouped, it must be conceded that no one of them would be thought the same face.

No. 1 represents a poor, whining hypochondriac, afflicted in his over-morbid imagination by a multitude of evils, annoyances, and

No. 2 is Our Sam, who has "jest come deown from Varmont to York, to see the sights." His astonishment, as he looks upon this or that wonder, is well acted, and it can be well imagined how funny Russell is when struck by this or that, to him, great singularity, he breaks out with "I swow now," or "Du tell!"

No. 3 is intended to personate a gentleman

from the Emerald Isle, not immediately upon his arrival here, but after having remained in the country long enough to have become awakened to a sense of his importance in the political salvation of Ameriky. His new clothes polish him off somewhat, but the face sticks out. This character is accompanied with a brief but thoroughly characteristic speech, in the course of which the play of expression and perfect Milesian gestures are too much for the stanchest gravity. The photograph by no means conveys a suitable idea of this inimitable portraiture.

No. 4 is Russell as a "strong-minded" lady. This capital representation should commend him well to the advocates of universal suffrage. He delivers a speech, here and there interspersed with apt hits and quotations from the literature of the so-called reform movement. The speech, when we heard it, commenced with the droll statement, that "It has been fully shown that *man*, as a success, is a perfect failure," and proceeded in the same incongruous style for some minutes. These are but a few of the impersonations which Mr. Russell most successfully undertakes; and it is only on account of the impossibility of transferring to the printed page anything like a fair representation of them that we do not at this time give a larger number. The play of expression on which the spectators' interest chiefly depends in the "shabby genteel," the very respectable member of society who gets very much fuddled on moral grounds, *i. e.*, to "set an' xample of—hic—the-e imm-orality of—in-temp—rance to the-e-e ris—hic—rising generation," the schoolboy who speaks a "piece," could not be pictured by any number of sketches. In these, sometimes the change from one general expression to another is so complete and bewildering, that one is led to doubt the performer's identity, even though he stands in full view near at hand.

The power Mr. Russell exercises over his countenance, and his ability to adapt it to the exhibition of delicate shades of feeling, are exhibited admirably at times, when from a dull and sodden or woe-begone expression he will gradually change it, until having passed through a dozen or more distinct phases it becomes lighted up with joy and hope, and

the heart of the sympathetic looker-on instantly takes on these shades of feeling, and experiences a genuine thrill of satisfaction at the close.

An entertainment of this kind affords a valuable study for those interested in the subject of physiognomy; and although one may go to it for amusement, there is so much realism displayed that he can not fail to derive much practical and wholesome instruction.

[A friend has supplied the following brief sketch of the gentleman whose talent as a humorist has inspired the foregoing "studies."]

MR. "SOL" SMITH RUSSELL was born in Brunswick, Mo., June 15, 1848. Most of his youth was passed in St. Louis, to which city his parents removed shortly after his birth. His peculiar aptitude for the stage began to develop itself at a very early age, and attracted attention by his unusual power of imitation. His first appearance on the public stage was in 1860, when he was but twelve years old, and his precocious talent was acknowledged by all who witnessed his performances. He at once adopted the profession, and during the five ensuing years traveled through the West and Southwest with different companies, and also performed in most of the Southern and Western theaters. In 1865 he joined the Peak and Berger families, and remained with them for one year. Laying aside his *penchant* for comedy, as theatrically defined, he assumed the *role* of character vocalist and humorist, which he has since so successfully maintained. He went from this company to that of William Peak, Sr., with which party he traveled for two years, becoming in the mean time an established favorite. Afterward he rejoined the Peak and Berger, with whom he continued another year, when the Bergers started a company of their own, in September, 1869. Mr. Russell joined them, and made a closer alliance with the family, by marrying Miss Louisa Berger on the 11th of the same month. His wife is a gifted lady and a superior performer upon the harp and violoncello, and one of the principal attractions of the remarkable family of which she is a member. That Mr. Russell is emphatically a great original in his department of representation it would be the height of folly to gainsay. His facial powers are of the highest order. He portrays a variety of characters that are each as distinct from the others as all are distinct from the humorist himself. In private life Mr. Russell is highly respected by

all who know him; he is a genial companion, and generous to a fault; his personations of character do not appeal to the vulgar taste, *à la Bouvry*, consequently his greatest success has been won before more cultivated audiences. The New Orleans *Times* of May 15, 1869, expresses in a few words the general opinion of the most critically appreciative amusement seekers: "Mr. Sol Smith Russell is something more than a performer in caricature—he is an

artist." This is the whole thing in a nut-shell, but speaks volumes for Mr. Russell's talents, both natural and acquired. Another quotation, from a prominent New York journal, must suffice: "The sensation of the evening was Sol Smith Russell; certainly there are few like unto him. His genius seems to be peculiarly his own. He is unlike all others—an isolated figure amid the great comedy cluster that is setting the world a-laughing."

YOUR LIPS—WHAT THEY MEAN.

READER, did you ever look in the mirror and examine minutely the shape of your mouth? If not, you will find it a very interesting feature for study. There is such a difference in mouths. One is a small, round affair with little pouting lips, only just large enough to nurse; another seems to be cut half across the face and is large enough for two. One is straight; another is curved. One is coarse and repulsive; another is handsome and attractive. There is "CHARACTER" exhibited in the mouth quite as much as in the nose or other features, if one only knows how to read and interpret its lines and configuration. Character? Aye, compare the following outlines



FIG. 1.



FIG. 2.

and say if there be not a difference. Let us analyze them by the rules of physiognomy:

No. 1 is the shape of a mirthful, hopeful, and happy disposition. It turns up at the outer corners, and is a smiling if not a laughing mouth. This is found in persons who make the best of their troubles, trials, and misfortunes. If they lose a dollar, they are thankful it was no more; if a friend, they find consolation in the fact that they were loved by him or her. And when they are themselves called to go hence, instead of repining or grieving at the inevitable, they accept the fiat of Providence and thank God that they have been permitted to live and enjoy life so long.

No. 2 is the mouth of a sober, thoughtful, considerate, and circumspect person. He seldom goes to extremes or commits excesses or gets off the track. "Consistency" is his mot-

to. He is neither High Church nor Low Church, but a Churchman. He is clean, intelligent, temperate, and has a well-balanced mind and character. He is cheerful, but not hilarious; hopeful, but not extravagant; dignified, but not haughty; religious, but not a bigot. He endeavors to do justly, to love mercy, and to walk humbly with his God.

No. 3 represents one who believes or affects to believe that

"Whatever is, is wrong."

This is the melancholy type; and the bad spirit which he entertains, cultivates, and cherishes gives his mouth that woe-begone



FIG. 3.



FIG. 4.

look, indicating a faithless, hopeless, skeptical cast of mind which makes its owner not only look miserable, but feel miserable, and serves to chill or freeze the warm life out of wife, children, dog, cat, and all who come within magnetic reach of him. If a husband, he is a wife-killer. If this cast of mouth belongs to a wife, *her* husband will never marry another! though she may live to become a widow more than once.

No. 4, Apollo's Bow, is artistic. It rightfully belongs to the poet, the sculptor, the painter, and the person of high quality. It may be—often is—aristocratic, and comes of high birth; and whether rich or poor it indicates real pride and an inward sense of real nobility. All lips, like all characters, are flexible and change rapidly, for better or for worse, according to circumstances within personal control. Would you like to know

WHAT SPOILS A MOUTH?

A bad temper, a quarrelsome spirit, selfishness, slander, tattling, backbiting, and sensuality. If one tells lies, the mouth will suffer. If one be dishonest, hard-hearted, and unkind, it will tell on the mouth, and any good physiognomist will read it there.

Other causes destroy the beauty of a mouth which would otherwise be counted comely. One is the use of tobacco. Here is a young man of eighteen or twenty years of age. He resembles his sainted mother. His features are much like hers,—eyes, nose, cheeks, chin, and mouth being regular and well formed. He begins to smoke. No marked change is immediately observable, but there follows a gradual letting down of the nerves and muscles of the mouth caused by the use of this powerfully laxative narcotic. But *he* sees no difference, and enjoying the so-called luxury, doubles the dose and smokes or chews till the

lines and curves of his once beautiful mouth are wiped out, broken down, lost, and nothing but coarse, flabby skin and flesh remain. Going on from bad to worse—and that is always the tendency in such cases—the next step to complete the ruin of the mouth is adding the use of bad whisky to bad tobacco. Now you come to the old codger, the vagabond, the outcast. Look at his mouth! If it be objected that we make too much of this one feature, the MOUTH, we reply that whatever injures one part of the person injures every part; and that coarse, flabby lips are found on coarse, flabby bodies, which manifest coarse, flabby minds. One part accords with every other part. If, therefore, we would have handsome mouths with handsome lips we must live proper lives, cherish a proper spirit, and live in all respects in accordance with God's laws.

"Handsome is that handsome does."

Department of Ethnology.

True Christianity will gain by every step which is made in the knowledge of man.—*Spurzheim*.

SOME PASSAGES FROM DYAK LIFE.

THE most interesting of the tribes inhabiting Borneo are the Land and Sea Dyaks. The latter division are a much fairer and superior people than the former; they are about three times as numerous as the Land Dyaks, and at the present time stand in that relation which we may suppose the old sea kings occupied in times gone by. They are essentially a nation of rovers, pirates, and practice head-taking in their warfare. Their complexion is comparatively light, and may be compared to buff leather; and as it is much fairer in hue than that of the neighboring tribes, they are very proud of it. As a rule, the Dyaks are almost beardless. If a man possesses a few hairs on the upper lip, he is exceedingly vain of his hirsute appendage.

The Sea Dyaks do not tattoo, which may be taken as evidence of their superior progress toward civilization. They look upon it as a sign of cowardice. They have a good deal of invention with reference to orna-

ments, of which they are, in common with other barbarians, very fond. They have a singular method of wearing ear-rings. Making an enormous hole in the lobe of the ear, they increase it gradually by inserting a series of plugs, and so drag it down as far as the shoulder by hanging leaden weights to it. And they also bore a series of holes quite around the edge of the ear, and fill them with various odd devices. A traveler describes the costume of the son of a chief who wore only one large ring in each ear, but from this ring were suspended a pair of brass chains on which were hung various ornaments. From one ear thus depended two boar's tusks, one alligator's tooth, part of a hornbill's beak, three small brass rings, and two little bells. The Dyak, however, wears his ornaments only on ceremonious occasions, and at other times the holes are kept from closing by wooden plugs. The Dyaks seem to be as fully impressed as those who boast the best modern civilization with the notion

that nature should be improved by art, so they can not even allow their teeth to retain their natural shape and color. As self-appointed dentists, the men generally file their teeth to sharp points, while some go farther, and scoop out the front face of each tooth, and thus having completely changed their shape, they dye them black. Our illustra-

hangs on his left side, which also has its tufts of human hair. His lower limbs are pretty well covered with brass rings. The peculiar jacket which he wears is made from the skin of the orang-outang, and on his head there is a sort of turban, ornamented with the feathers of the Argus pheasant. The figure on the right belongs properly to the



DYAK WARRIOR AND DUSUM.

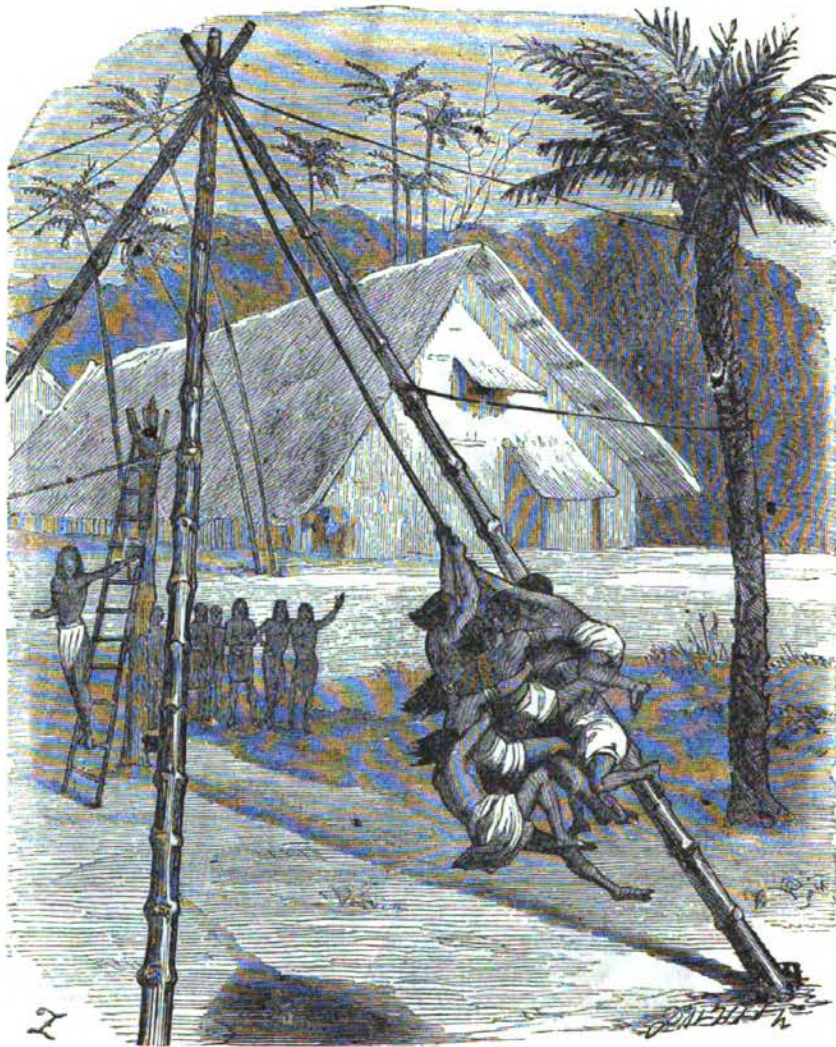
tion represents two Dyak warriors, one in full costume and the other in ordinary attire. The one on the left carries in his right hand the chief weapon of those wild tribes called the *sumpitan*, while his other hand rests on a wooden shield, which is covered with tufts of human hair, an evidence of his prowess in head-taking. His *parangihlang*, or war-sword,

Dusum tribes of Dyaks, who inhabit the northern coast of Borneo; they wear less clothing than any other of the tribes of the island, their whole dress being the *chawat*, or breech-cloth, and large metal rings hung about the neck and hips. The hair is worn long, and bound merely with a piece of cotton cloth. This idea of binding the head was

perhaps derived from the Malay Mohammedans, who long ago settled in Borneo. Their weapons are as simple as their costume, being nothing but a metal head bound to a bamboo shaft. The Dyaks in appearance are not so powerfully built as the average European, but they are wiry, symmetrical, active, and remarkably strong. On a long journey

lain down from sheer inability to proceed farther, being taken up by their Dyak companions and carried briskly along.

These people exhibit some degree of mechanical ingenuity. They make the numerous swamps of Borneo passable with bridges which they call *batangs*. While this form of bridge would not be tolerated by white civ-



THE BORNEAN SWING

over the rough roads of their country their endurance is well shown, for when an Englishman has given out from fatigue, his Dyak companion has taken the burden which the white man carried, and marched along with it without displaying any sense of having increased his own labor. Instances are related of European travelers, when they had

ilization, for the Dyak purposes they are quite sufficient. Two bamboo poles, driven into the ground so that the upper extremities cross, are lashed together at the intersection. About thirty feet distant another pair of poles is driven into the ground and secured in a similar way, and then a long bamboo is laid upon them. In this manner a line of

bridging, stretching in some places for miles, is constructed, which appears more like a rope-dancer's apparatus than anything else. So fond are the natives of these bridges that they throw them across gorges of great depth. Strange as it may appear, the Dyak has been known to take a heavy white man on his back and carry him a mile or more over these *batangs*. While our Blondins may erect their tight-ropes for the display of daring and balancing skill, the Dyak erects his rod bridge for practical purposes, and displays coolness and daring for some positive advantage.

The Dyak women dress somewhat like the men, but around the waist they wear a much longer garment, called a *bedang*. When their occupations require them to be much out of doors, they wear a jacket without sleeves, open in front; but as this jacket hides the glossy brown skin on which they pride themselves, they generally dispense with it when indoors. In youth they are remarkable for their symmetrical and graceful forms, but they deteriorate early, being at thirty apparently old and ugly. Their eyes are black and bright and the lashes singularly long. The nose is disposed to turn upward; but the face is pleasing in expression, although it would seem that the utmost is done to render themselves ugly. Their teeth of course are filed and blackened, and being inveterate chewers of *betel*, the mouth becomes very much disfigured. But the chief point in a Dyak woman's beauty is her hair, which is black, very thick, and shining, and so long that it almost touches the ground when permitted to flow loosely. They do not differ much from their sisters of the highest civilization who possess abundant hair, in being exceedingly vain of this perquisite; and they have a habit when engaged in conversation of flinging their tresses from side to side by movements of the head. Unfortunately, however, a fever which is quite prevalent in Borneo has the effect of very much reducing the attractiveness of its victim by despoiling her of all or the greater part of her hair. The women are also exceedingly fond of ornaments. They almost load themselves down with brass rings, bracelets, necklaces, bands and bodices, of singular and often ridiculous shape.

A singular game which the Dyaks are much addicted to, and which is illustrated in

the accompanying engraving, is the swing. It has for them more the character of a religious ceremony than an amusement. With three strong poles, some forty or fifty feet in length, they erect a strong derrick, and at the junction of the poles secure a long and stout ratan, the loose end of which is formed into a large loop. At some distance from the frame, but within reach of the ratan, a bamboo stage is erected. When all is ready, one of the swingers mounts the stage, and drawing the ratan to him by means of a string, places his foot in the loop and swings off with as much force as he can exert. As he returns, another, who has already placed himself upon the stage, leaps on the swing, and others successively or by twos spring on, if they can, until ten or a dozen are swinging together. As they swing they strike up a monotonous, dirge-like chant, which is understood to be an invocation to their gods for an abundant harvest and good fishing.

As warriors the Dyaks, especially those of the Sea division, are exceedingly brave, showing, when in pursuit of heads, the most terrible ingenuity. This head-hunting, which is analogous to that practice alluded to in our sketches of some of the Philippine islanders, and also the scalp-hunting propensities of our American aborigines, at one time became a mania, and spread over the whole island. In order to suppress it, if possible, Sir James Brook took matters in hand. The Sultan, Bruni, being in despair at the state of things, ceded the territory to him, and that bold and persistent Englishman succeeded finally in abolishing head-hunting as an acknowledged practice by his system of inflicting heavy fines on those who were detected in it.

The Sea Dyaks fight chiefly in canoes. They have some idea of naval tactics, and can arrange their canoes in good order for the enemy. It is in their feuds and wars that they now take heads.

THE VATICAN.—The Papal palace at Rome is called the Vatican, from its situation on the Mons Vaticanus, at the extreme northwest part of the city. It adjoins the Basilica of St. Peter, and is a little less than half a mile from the Castle of St. Angelo, with which it communicates by a covered gallery built by Pope John XXIII. about the beginning of the fifteenth cen-

tury. The palace, which now ranks as one of the most interesting and magnificent in the world, has grown up by degrees, and consequently exhibits a great want of harmony in its architectural proportions. Very little of the present edifice is older than the time of Nicholas V. (1447.) This palace has been for ages the principal residence of the Pope, the seat of the great library, the museums, and collec-

tions of ancient and modern art, which constitute for visitors one of the chief attractions of the city of Rome. During his long incumbency the present Pope has done much toward restoring and completing many works in connection with the place. The building, with its gardens, covers a very large area. Murray's "Hand-Book of Rome" contains a very interesting account of it.

PHRENOLOGY OF THE EARTH.

PRINCIPLES are universal. If it be demonstrated that the brain of the individual man is the organic form of the mind, and that each compartment thereof, each convolution of its cerebral substance with its density, flaccidity, volume, and quantity, is the molded and expressive form and organ of a specific and distinctive mental character, it is so because it is a law of life in its least or individual form. And this principle being established, it must be true that the same law is written upon the whole as in each of its parts; *i. e.*, that what is true of the individual man is also true of the collective man. And society is but a man in a larger form; indeed, all the inhabitants of the earth are but the aggregate or collective man;—man in the fullest and most comprehensive manifestation of human life; and could all the ruling characteristics, peculiarities, and idiosyncrasies of this collective man, as he manifests them in Europe, Asia, America, Africa, and the isles of the ocean, be seen in one comprehensive view, they would present no other than an embodiment of the structure and organism of the largest and most perfect human brain; for the genius and character of the inhabitants of the distinctive communities of man upon the earth mold and stamp themselves upon all the outward characteristics of his life; so that every nation or people is but a typical image of the same qualities that are mapped on a smaller scale in the individual brain. Thus every nation is, as it were, generic, and has a peculiar and distinct idiosyncrasy. The ruling characteristic of one nation or people may be the religious; of another, the moral, the conscientious, the benevolent or friendly; while others may be conspicuous in the development of Combativeness or Destructiveness by warfare; or by science, skill, and the construction of works of art; or for the lust of power, pride, ambition, and love of dominion. Some are distinguished for their gravity

and dignity—others for their frivolity and light-heartedness. At the present day these characteristics may be more or less combined or commingled in the same region of country, because these nations have by immigrations and the results of conquests, captivity, intermarriages, etc., become more or less intermingled, and thus the lines of distinction may be less visible. But if we take original races, or as early as we can find their history, we may see in the distinctive peculiarities of the Mongolian, Malay, Ethiopian, Teutonic, Circassian, Slavonic, Scandinavian, Celt, Anglo-Saxon, Gaul, and other races, the ruling or predominating traits of character as they are given in a phrenological chart; and by a more specific subdivision of this general arrangement, as they present themselves to us in the Jew, Assyrian, the nomadic Arab, the Mohammedan, the Egyptian, the Babylonian, the Hun, the Goth, the Pict, and all the multitudinous varieties of character which distinguish the *Anthropos*, or the collective man upon the earth, we may well be able to fill up every department of a phrenological head. And these people are as distinctive as is each particular organ; and they are the embodiments of their functions in the generic man.

Let us take a few of these by way of illustration, as we find them in their earliest histories.

The distinguishing peculiarity of the Jewish nation was *religious*, not because they were really or internally religious, but *representatively* so. They were eminently typical of the religious character, and all their rituals were forms of worship of which Jehovah was the central object. On the map of the mental earth, therefore, the Jews, Jerusalem, and Palestine, or the Holy Land, would occupy that region which in the individual head is termed *Veneration*. Many of the surrounding Gentile nations, though not in possession of a Divine revelation,

yet retained legends and traditions of a once pure faith which inculcated principles of sound morals, benevolence, and justice, and also of a knowledge of a life beyond the grave. The Easenes, Gnostics, Manicheans, and the Platonic philosophers generally, inculcated those tenets and doctrines which occupy in this broad phrenological chart the province of the coronal faculties surrounding "Veneration." Then in close proximity to the above we have a very marked and distinctive people, representative of another important mental faculty: this is Assyria. The Assyrian is a man of war from his youth. On the slabs discovered in the exhumations at Nineveh, he is constantly portrayed as a warrior, and as either engaged in battles or in the triumph of conquest and victory.

The war chariots of Sennacherib, his armies of horsemen, his spears, his shields, his bows and arrows, are everywhere connected with the Assyrian character; even his written words are cuneiform, or made in the form of arrows. Outwardly, he is the type of physical Combativeness, and at the same time of *mental combat*; for all those contests and conflicts were symbolic representations of and denoted those that were *intellectual*, i. e., mental prowess and polemic skill; thus the reasonings of Comparison and Causality are in like manner represented and portrayed by this correspondent imagery. And the Egyptians are not less remarkable as another equally peculiar and distinctive people, though of a different character. Egypt for ages past has been recognized as the cradle of the sciences, or the depository of all human learning. In her libraries were stored all the lore of ancient days. In her colleges and temples were taught the mystic secrets of "the years before the Flood." On her obelisks and in her pyramids were engraved in hieroglyphics and in symbols the records of her erudition and artistic skill. Egypt stands for and is a monument of human science, and its remains are the stamped impressions which constitute it a type of its original character. And the region of its organic function may be found in the "perceptive faculties," which constitute the lower tier of the frontal brain.

And the mythologies of Eastern and Northern nations are but so many pictured and idealistic or symbolic images of faith in a spiritual world, the organ of which faculty was denominated Marvelousness by Gall and Spurzheim.

So, also, we may see from researches into ancient Babylon, how correctly, as a type, it answers to the mystic Babylon—the lust of

dominion and the pride of wealth. For Acquisitiveness, as another form of the selfish faculties, and the accumulation of riches by trade and commerce, perhaps Tyre stands forth more pre-eminently than any other place in the ancient world.

The nomadic or wandering Arab is but a type of Locality in the collective man; while Inhabitiveness has been as distinctly portrayed in the Chinese character. And so we may find everywhere on the earth generic types of each particular human function and organ as certainly as we can on the individuals who compose the mass; for the whole world is but man (*anthropos*) in his largest or collective form, the *Macrocosm*; while the individual man (*aner*) is the *Microcosm*, in which they are combined in their smallest forms. And it must be obvious to every attentive reader of the Bible, that the naming of these nations and people is not because of the historical facts connected with them, but because of their *mental* characteristics; or because they are types of specific qualities of affection, or of thought, intelligence, ignorance, appetite, or passion, which are common to every man in every age of the world.

The specific application of this principle to the right meaning of Scripture will be found more particularly illustrated in a recent work entitled "The Two Great Books of Nature and Revelation," at the 886th and following pages, where allusion is made to the garden and rivers of Eden, the Jews and their land, Assyria, Egypt, and their relation to the East, West, North, and South, as well as their respective significations.

GEORGE FIELD.

HOW THE MT. CENIS TUNNEL WAS FINISHED.
—M. Genesi thus describes the meeting of the workmen in the Mt. Cenis tunnel, five thousand feet beneath the summit of the mountain, on the 9th of November: I was on my regular round of inspection as usual, when I fancied I heard through the rocks the noise of the explosion of the mines on the Bardonnechia side. I sent a dispatch to discover if the hours agreed. They did, and then there could be no longer any doubt we were nearing the goal. Each following day the explosions were to be heard more and more distinctly. At the beginning of December we heard quite distinctly the blows of the perforators against the rocks. Then we vaguely heard the sound of voices. But were we going to meet at the same hole and in the same axis? For three days and three nights engineers, foremen, and heads of

gangs never left the tunnel. The engineers Borelly and Boni directed the works on the Bardonnechia side; M. Copello on that of Fourneaux. We could not eat or sleep; every one was in a state of fever. At length, on the morning of the 26th December, the rock fell in near the roof. The breach was made and we could see each other and shake hands. The same evening the hole was clear—the last obstacle—and the mountain was pierced; our work was done. What a rejoicing we had! In spite of the war, the cheers of all scientific

Europe came to find us in the entrails of our mountain when the happy termination of our enterprise became known. The two axes met almost exactly; there was barely half a yard error. The level on our side was only about three-quarters of a yard too high. (The variation of less than a yard in thirteen thousand.) But after thirteen years of continual work, who could even hope for so perfect a result? We placed at the point of junction an inscription on a marble tablet, commemorative of the happy event.

Department of Our Social Relations.

Domestic happiness, thou only bliss
Of paradise that has survived the fall!
Thou art the nurse of virtue.

ONLY A HEAD; OR, NOT A CENT IN THE WORLD.

BY LYDIA M. MILLARD.

IT was only a head, a picture of a head. I opened a magazine, and on the first page I saw this head and a description of the man who owned it. I know little of Phrenology, but this was a phrenological description. I remember some of it—Cautiousness large, Self-Esteem large, Acquisitiveness large, Benevolence small, etc. It was a full description of a man who had loved and served himself; who had lived miserly, and miserly had died. The clear outline, the strange shape of the head I remember. I think I should notice a head like it anywhere. While reading the article I was interrupted, and some one walked off with the magazine, and "I can't find it high nor low," as my grandmother used to say; and this was the way I was interrupted, by the words "Rags! rags! rags!" under my window, as the ragman's bell jingled on.

"The ragman is here, ma'am," said Bridget, coming in just then with the old brown rag-bag.

I went with her to the door, and he weighed the rags.

"Just four pounds exactly, ma'am," he said, and he handed me twelve big, dingy-looking coppers. Their wrinkled, rugged edges suggested the possibility of their having been handed down from the ragman's great-grandfather.

"I take newspapers, ma'am," he added, gathering up his rags. I sold him three bushels of papers, for which he paid me three fifty-cent stamps.

I laid the coppers on a table in my room, beside a big, open dictionary. I moved a chair, hit the dictionary, and down went the pennies under the sofa, under the washstand, under the bureau, under the bedstead, and I scrambled after them. I thought, as I put them in my drawer, I wouldn't burden my pocket-book with those clumsy, contemptible coppers. The man who counts and hoards them has a soul as small as the penny he worships. I never know exactly how many pennies I have.

My grandmother used to say few persons will do anything for anybody unless they were sure of being paid for it in money or favors; but I have always believed if I should become destitute any day, I would find persons who would gladly relieve me. Just as I had put up the pennies, Mrs. Rambert called to solicit my help for the Fair. My two neighbors, she said, had each given ten dollars. I gave her five. It happened to be the only money in my pocket-book except the ragman's three fifty-cent stamps and two ten-cent bills. But I knew somebody would come home that night who could probably put some more in the pocket-book. I felt quite amiable that morning. Bridget and Margaret, my two efficient handmaidens, kept parlor and kitchen in comfortable order. "I mean to keep them till they die or get married," I said to myself, as I seated myself by my writing-desk to answer some letters.

I was suddenly interrupted by a knock on

my door. It was Margaret, with her apron up to her eyes, and she burst out sobbing, "Oh, Mrs. M——, my cousin isn't expected—" Patrick was waiting for her at the door, and in a moment she was gone. Margaret "had stood" for Patrick's only son the Sabbath preceding, and I feared she would not soon return. In an hour after, Bridget came to tell me that her husband had arrived from the West, and she must go with him right away. John couldn't lose a day. And she further told me not to wait for Margaret, for "Margaret was to be married to-morrow week."

Bridget had told me that she was a widow, and Margaret that she would stay with me a year; and these husbands turning up gave me quite a surprise. So I am left helpless. A note came from N——, saying he'd not be home that night. I lay all night wide awake, alone in the house, thinking of every ghost story, every burglary, and all the spiritual accounts I had ever read or heard, raps, visions, apparitions, dreams, and all. I was glad enough to hear the voices of the milkmen under my window as the day dawned at last. About ten o'clock Mrs. Foote called. She told me that Mrs. Gray had left for Europe, and her cook, a wonderful cook, was staying up town in New York, at some Mrs. Riley's, and would only be there that day. I could probably obtain her; and her cousin Susan, across the street, could tell me just where she was.

I thought I would hunt up this famous cook. Susan told me she was at No. 221 Twenty-third Street; West Twenty-third Street, she thought, but she wasn't sure. I took a car, crossed Fulton Ferry, went up to West Twenty-third Street, and explored that locality thoroughly. Among the twenty occupants of the twenty apartments in the five stories of No. 221 there was no Mrs. Riley.

I found at the corner grocery store the whereabouts of Mrs. John, Mrs. Patrick, and Mrs. Michael Riley, visited their several residences, but neither was the Riley I wanted.

Possibly Susan might have mistaken the number, reading it backward. It might be No. 122. I explored No. 122 from basement to attic, and in the rear room of the top floor, with nine small children and one in her arms, I found the veritable Mrs. Michael Riley. The girl I sought had just left for Hoboken or Jersey City or Staten Island, Mrs. Riley couldn't remember which. I descended the four narrow, dark, rickety flights of stairs through groups of ragged, bright-eyed, dirty-faced children, of all ages and types, blonde and bru-

nette. I thought, as I went down the last flight, if I should be found dead to-morrow, the coroner might justly bring in the verdict, "Died of stairs." My foot slipped on the last step, which was twice as high as it ought to be, and I fell back against the open door and bumped my forehead. A roguish urchin on the sidewalk exclaimed, "Golly! didn't she get Hail Columby?"

My quest was ended, my investigation over. I passed up the street and near a large confectionery. I thought I would buy some of those tempting sugar almonds in the window. The real soft sugar almond, dainty and delicious, has no sweet rival,—so thinks a friend of mine, and I like in the evening to lay these pet sweets of his between the open leaves of his magazine, one by one, as you give a sugar-plum to a spoiled child, and have him ask, with a boy's eagerness, "Got any more?"

I bought four ounces of the exquisite-looking, jeweled, and mustached clerk, bowing and smiling as if his graceful presence adorned his position among the sweets. He did up my almonds as daintily as if he were enwrapping some royal infant in cloth of gold.

"The almonds are twenty cents." I handed him one of my fifty-cent "stamps." I meant to spend two of the fifties in little dainties for my Halicarnassus. The man looked at the currency and said, "This is a counterfeit bill." I handed him the second, and the third; he said they were all counterfeit. "I know the man I got them of," I blushed and stammered out. "Perhaps you could exchange them for good, then," said the clerk, politely.

Alas! I thought I might as well trace some comet in its flight as follow that ragman in his metropolitan wanderings through street and avenue, where he may be now dispensing his false fifties to other matrons as wise as I. I am all the more provoked because only last evening I bought a Brooklyn newspaper of a newsboy, and he took a two dollar-bill of mine to the grocery to get change, leaving me his pile of papers, and I have never seen him since.

I handed the man back the almonds, saying, "I have no more change." I didn't stop to see whether he was as deliberate and graceful in undoing his almonds as he had been in doing them up. I had a ten-cent bill, I found, in my purse.

I was provoked at myself, the ragman, and everybody; the best I could do was to go home. I took a stage without looking very

carefully at it. I was tired, and I was the only passenger. I knew the stage would stop at the ferry. I closed my eyes, and, being very weary, must have fallen asleep; at last I opened them, thinking it was time for me to be at the ferry—but there was no ferry, no Park Row, no City Hall—no familiar landmarks ferryward. There was a big stone building with flowers all around it, looking very much like a reservoir, and I, precious fool that I was, had taken an uptown stage and arrived at the Croton Reservoir, by no means at that late hour and in the low state of my finances the goal of my ambition. I got out of the stage; felt in my pocket; I had four cents left, with which to get to and across the ferry and up to my Brooklyn home. I had lived in New York a long time. Its churches and streets were dear and familiar. Were I an artist I could sketch from memory the spire of Grace Church, the rows of windows in Trinity, and even the rows of clerks at Stewart's. I like New York hand-organs, apple-women, flower-girls and all; but in New York without money, I might as well be in Guinea or Scandinavia. I walked, and walked, and walked to Twenty-third Street, hoping I could cross somewhere and find a cat to take me to Fulton Ferry. I would screw up my courage and ask the conductor to take me for four cents; once at the ferry, I might see some acquaintance from whom I could borrow a few cents to get me home. How I longed for those coppers, those contemptible coppers, lying in inglorious ease in my drawer! They could transport me in glorious independence across old Manhattan to that now hopelessly far-off ferry. My weary feet could no more accomplish that distance than they could cross the world. Never since that day has even an old rusty copper seemed contemptible in my eyes. I thought I would walk on and ask the first pleasant-looking female I saw if there was a car near that would take me to Fulton Ferry; she would reply "No—take a stage;" and I would say, "I have lost my money and haven't change enough for a stage." She would reply, "Here, take six cents and welcome," etc. This was a lame plan, but the best I could think of. I saw a large drug store on the corner. I have always found New York druggists polite and accommodating. They often help me to find among the labyrinths of names and streets in the directory the very Smith, Brown, or Jones I want.

The druggist in this store was a tall, handsome man, bland enough to do any favor one

would think, as he asked me, "What will you have, ma'am?"

"I called to ask you," I said, "if there's a car near here I can take for Fulton Ferry?"

"Take the Fifth Avenue stage, ma'am," he replied, "that will carry you directly there."

"I have lost my money," I said, "I haven't enough to take a stage."

"Ah, indeed! ma'am," said he; and that beautiful, bland, smiling expression went away suddenly from his face and retreated somewhere into the back part of his head I suppose, as he turned dignifiedly around, leaving me standing alone, and walked to the other end of the store. I stood a moment, looking at the shining glasses in the windows filled with their beautiful colors, and I thought how like their tasteless, worthless radiance was the bright look that had beamed on me only a moment from their owner's handsome face. Had I, discouraged by his indifference, gone hopelessly on my journey's length, those clear, cold eyes of his might have read in some morning's *Times* my unknown name among the "mysterious providences." As I stood there, all at once I remembered the head in the magazine—how like it was to this druggist's head—an exact counterpart of it, Cautiousness, Self-Esteem and all. Was it only a coincidence, or was there something in Phrenology after all? I remember reading in a magazine once, "The time will come when we will know each other at sight;" and I believe the time may come when, to some practiced eye, a head's gifts and faults may be known at sight, as the student of nature comes at last to know at sight the type of insect, bird, and flower.

I walked on and met two sober-looking, stately dames in black. "Affliction has sobered their faces, perhaps it has softened their hearts," I thought, as I asked them the same question I had asked the druggist. They gave the same answer, and I repeated the brief story of my destitution.

"Ah, indeed!" they both replied, and passed silently on.

I walked three blocks more, met a beautiful blonde, radiant in velvet, *valenciennes*, and diamonds. Abundance, independence, consequence seemed to display themselves from the tip of the white ostrich in her hat to the trail of the blue *moire* skirt. I addressed her, receiving the same answer and the same "Ah, indeed!" still more coldly and haughtily given.

Six more weary blocks I went, and I met a

tall, pale-looking gentleman, with spectacles, dressed in finest broadcloth. He had a bundle of tracts, I thought, in his hands. I addressed him as I had the others, receiving the same reply. I told him my need, and he said he made it an invariable rule never to give to strangers; the few pence he might bestow upon me I might spend in some intoxicating draught. He was a solemn-looking individual with a cane. I thought he would like to deliver me a lecture on temperance, of which I felt just then in no need—and his cane and spectacles passed on. I walked down to Nineteenth Street. I met an honest-faced Irish girl, with faded worn hood, worn plaid shawl, and clean old calico dress, and a small bundle in her ungloved red hands. I asked her about the car, telling her of my loss.

"Oh, ma'am! what a pity, ma'am, such a delicate lady as you should walk so far for the want of a few cents!" and her round face drew down with a sober sympathetic look. "I've just spent all my money for the makins of an apron," she said; "but if you'll wait, I'll ask the store man to take the apron back—maybe he'll give me the money agin, and you can have it and welcome."

"No, no!" I said, as she turned to go back to the store with her little bundle. "They'll never take anything back after it is cut; they'll say it isn't honest."

"Well, then, take the apron, ma'am—it cost me eighteen cents; and sure the stage man may take it for ten," and she urged me to take the piece of brown and white checked calico. I shall never forget the color of the pattern.

"No, no! I won't take your apron. These drivers have to take money only; that's the rule."

"Well, ma'am, just wait here in the baker's at the corner, and I'll go to my sister's at the Central Park. She'll give me the change, and I'll hurry back fast as I can; walking won't hurt me, I'm used to it."

This, of course, I couldn't let the kind creature do, but I blessed her honest heart. And if I ever reach the beautiful city, I may meet her face again in some golden street among the shining ones. The old calico will be gone, and no robe may be more beautiful than hers.

I walked a few blocks more, and I saw a young lady with soft brown hair and mild blue eyes stopping at a grocer's, pricing some oranges. I ask her the old question, "Is there any car near here to take me to Fulton Ferry?"

"No; take a Fifth Avenue stage; walk with me to the corner, I will show you a stage."

"I can't take a stage; I have lost some money; I have only four cents left; six cents more would take me to the ferry, where I could probably find some one to lend me enough to get home."

"Oh, poor soul!" she said—as I put my hand in my pocket for my two two-cent pieces, and—I found them gone, too—slipped through a hole in my pocket. I didn't know there was a hole there, but I think I had walked enough that day to wear a hole in the pocket. I exclaimed, "My four cents are gone, too! I haven't an accessible cent in the world!" I suppose my face looked to her amusingly doleful, considering the very dire calamity I was in.

"Poor soul, how you must have worried!" she said again, bursting out laughing; and I, in a kind of hysterical mood, to keep from crying, burst out laughing too. She added, "Here, take this fifty cents, and this twenty-five also; you have walked so long, you have had no lunch. There's a restaurant on the corner; go and get some oysters, and then take the first blue stage you see going down," she added, laughing again.

"I'll take twenty cents," I said, "and be much obliged to you, but no more." My last hour's experience had made me feel that twenty cents was a liberal bequest; as for the munificent donation of fifty, I should stagger under the weight of such a great obligation.

But she made me take the money, saying that if ever she should be in like trouble, she should be sorry if somebody couldn't do as much for her. She looked not only willing but glad to do me the favor. She looked something like the picture of Miss Burdett Coutts, and a phrenologist would say she had the "same large development of Benevolence towering up at the median line of her head."

Her name, I learned, was Miss Ward—Miss Ward, of Twentieth Street. The quakerlike simplicity of her dress, the soft brown hair, the sweet blue eye are a picture hung up in the studio of my soul forever, and every day I put fresh flowers of gratitude in a little vase in my heart under that Miss Ward's picture. I shall see her again; the face to wear the hue celestial won't change much—nor the voice nor manner change, for some angels walk this earth unseen; but when I cross the last ferry, over the dark river, I shall hear her voice in the choir celestial singing, "Not unto us, not unto us, but unto Him be all the glory," and I

shall read her name in the book of life—in the directory of angels.

What a pity that druggist hadn't some of Miss Ward's *frangipanni* of soul, sweet and everlasting.

As for me, I must confess that since that day I have prized money, a little money, more than ever, for who, with a world of millionaire memories behind, a golden sea of dreams before him, or a mine of wealth in his soul, can live calmly or comfortably one short day without a cent in the world.

I reached home at last. I had a long fit of illness; it all seems like a dream now; they say I had brain fever. They gave me medicine to soothe and quiet me—but it gave me no calm sleep—only strange visions, in which gigantic druggists, lowering dames in black, and stately blondes passed on and shook their heads at me.

When I came back to my old self at last, the first words I remember were Miss Ward's plaintive and musical "Poor soul, how you must have worried!"

What made the noble difference between the druggist, the ladies in black, the blonde, the tall gentleman in spectacles, and Miss Ward? It was not fortune or education—it was, though I know little of Phrenology—*only a head.*

LITTLE JOE.

A SKETCH FROM LIFE.

THE sweet light of the early day
On noiseless wings had found its way
To where Ruth Herbert, dying, lay,
Through alleys dark and damp and drear,
To where Death's angel waited near.
It kissed Ruth Herbert's faded cheek,
It danced upon the lips so meek,
It softly pressed each folded lid
That from its gaze the brown eyes hid.
It crept upon the brow so fair
And nestled in the curling hair.
Ruth Herbert smiled; just then a cloud
Folded the sunlight in a shroud;
And soon a cloud as dark had place
Of the sweet smile upon Ruth's face.
The pang that stings a mother's heart,
When from her birdlings called to part,
Opened once more her glassy eye,
And gave a look of agony
To her young face, for the same bed
That pillowed now her dying head,
By yet a fairer one was pressed,
Whose infant brow her hand caressed;
And while her own heart fainter grew,
And earth receded from her view,
With quick pulsations to and fro
Beat the warm heart of little Joe—

Her noble boy, for whom two years
She had tolled on through doubts and fears,
And but for him her only pride
Had sooner in the struggle died.
The mother-love so strong and deep,
Whose tender care can never sleep,
Whose wondrous power can almost stand
A guard to ward off Death's cold hand—
This love thrilled all Ruth Herbert's soul,
And gained of every thought control.
Life's heaviest burdens she would take
And bear them for her darling's sake;
And Death, she wildly shrank to meet,
That but for him had been most sweet.
She raised to God her heart's lone cry
That He would let the "cup pass by!"
Yet nearer crept the icy chill
That soon her poor tired heart would still;
But in the strength of her despair,
Since fate denied her dearest prayer,
These words were breathed distinct and slow,
"O God, take care of little Joe!
Take care of little Joe!" His ear
Had caught the words, and in the fear
Of some impending danger near,
He nestled close upon the breast
Where he had found his wonted rest.
No tender word, no fond caress
His little troubled heart could bless.
He sought in vain the mother's arm
To shield him from the coming harm.
"Take care of little Joe!" he cried;
And yet the sleeper at his side
For once slept on, nor stirred, nor smiled,
Nor heard the pleadings of her child.
But oh, where'er the feet may go,
Our heart will yearn for little Joe.

HOPE ARLINGTON.

EYES AND NO EYES.

YOU have all read the story in the school readers of the two boys who went over the same route, one with his eyes open, and the other with them shut. It is old, but worth repeating and worth remembering every day. So many things slip by us; so many things worth knowing go on right under our eyes without being noticed.

I knew a man, I think I may have told you of him before, a busy man, who had very little time for reading or study, but whose mind was a perfect storehouse of information on almost every subject.

"How does it happen that you know so much more than the rest of us?" I asked him one day.

"Oh," said he, "I never had time to lay in a regular stock of learning, so I *save all the bits* that come in my way, and they count up a good deal in the course of the year."

That is just the thing—*save all the bits.*

"That boy," said a gentleman, "always seems to be on the lookout for something to see."

So he was; and while waiting in a newspaper office for a package, he learned how a mailing machine was operated. While he waited at the florist's, he saw a man setting a great box of cuttings, and learned, by the use of eyes, what he never would have guessed, that slips rooted best in nearly pure sand.

"This is lapis lazuli," said the jeweler to his customer; "and this is chrysoprase."

And the wide-awake errand-boy turned around from the door to take a sharp look,

so that in future he knew just how those two precious stones looked. In one day, he learned of the barber what became of the hair-clippings; of the carpenter, how to drive a nail so as not to split the wood; of the shoemaker, how the different surfaces of fancy leathers are made; of a locust, that his mouth was of no use to him in singing; from a scrap of newspaper, where sponges are obtained; and from an old Irishwoman, how to keep stove-pipes from rusting. Only bits and fragments of knowledge, but all of them worth saving, and all helping to increase the stock in trade of the boy who meant to be a man.—*Exchange.*

THE BOY THAT HAD NO REMARKABLE QUALITY.

MOST boys who "get into the newspapers" are very *remarkable* boys.

"Joa" had nothing about his looks, or actions, or color that attracted the particular attention of anybody.

When he first breathed the vital air he was simply a boy-baby, with two hands, two feet, two eyes, two ears, one mouth, and one nose. He did not laugh and crow and sit upright as young geniuses do in their young babyhood, but he slept and waked, and ate (baby-food, of course) and cried like any common baby.

When he grew older there were no uncommon developments, except that he was fat and healthy and heavy.

Nobody congratulated his mother on raising a future President, nor applauded the bright genius that sparkled in the baby's eyes. The gossipers looked wonderingly at each other as the tender mother watched over her baby-boy, provided for his comforts, and pressed him to her warm bosom.

He grew to boyhood, but he was only a common boy. He learned his A B C with difficulty, and was slow in learning to read. His teacher thought he never would "get through the multiplication table." But he never forgot it.

When the boys went a-fishing, Joa went too; but he was slow in getting his hook and line ready. The other boys were *on* and *in* and *around* the lake before *his* hook was fairly settled in the water. "Too slow to move," the boys would say. "He'll sit there expecting the fish to come to him." It was even so; he remained stationary and fixed; but when night came, somehow his basket was always full,

while many of the bright, talking geniuses went home with the sad intelligence that the "fish wouldn't bite."

Joa's home was full of life and noise and bustle of intelligent older children and bright younger ones. Joa found himself, and everybody else found him, solitary and alone, taking very little notice of the stir around him.

When he grew to be a man, the bustling drive-aheads laughed at his plodding; but by some means he seldom made a mistake, and though he did not seem to accomplish as much in a week as many others did in a day, yet at the end of a year there was always something tangible in his results, while the work of those who seemed to utterly outstrip him at first ended in demolished air-castles.

He has passed the meridian of life. Men eminent in the professions respect his judgment. Business men coming upon the stage of action long to learn the secret of his success. The bank leans upon him to carry it through the trying crisis, merchants and manufacturers lean upon him to save them from bankruptcy. Steady, constant, and hard study made him a scholar; persevering industry, accompanied with economy, raised him to opulence; close observation and deliberate reflection cultivated a sound judgment, and honesty and integrity secured for him the confidence of all who knew him.

[This is a good description of a winter-apple organization—made up of a calm, strong, slow temperament, with large reflective organs and moderate perceptions, the whole combining to give a meditative moderation, but a broad, deep soundness of judgment. The brilliant child is

apt to be petted and to become superficial. The slow, plain-looking child is not flattered and spoiled, and he is obliged to fall back on solid attainments, and thus he is practically driven to substantial talents and enduring acquisitions. A fine dancer, a good singer, who is handsome and attractive, is apt to devote himself to appearances; while his opposite plods in the realm of solid duty and economy, and finally is found with money to let, and financial wisdom to guide public affairs.

Harvest apples are luscious, but flashy, and soon gone. Their fragrance fills the or-

chard for a few days, and they seem to look with scorn upon the yet hard and sour and odorless winter apple. When the winter reigns and the orchard is buried in snow, and the frosty air is screeching in triumph through the naked branches of the trees, the house is filled with the rich aroma of scarlet or golden fruit, which is now luscious, mellow, and tempting. So some persons ripen early, are quick, showy, and never amount to much, while others are slow in coming to maturity, but are sound and enduring when brought to the solid work of life.]

Department of Physiology—Our Sanitarium.

The truths of Physiology should be inculcated and enforced early and earnestly, and with the emphasis of high religious duty.—*Youmans*.

"TAKING COLD."

BY R. T. TRALL, M.D.

MEDICAL literature is full of misnomers. Physicians talk of their patients "taking a fever;" "going through a fever;" "having a course of fever;" being "kept up during a fever;" a fever "running" twenty or forty days, etc., as though a fever was something analogous to a ghost or a goblin, a spook or a demon. And they tell us of their patients being "attacked" with the rheumatism; having a "touch" of the cholera; being "struck" with the palsy, etc. When a patient is worse at the crisis of an inflammatory or bilious fever, they say the typhoid has "supervened;" and when death succeeds inflammation in a part, they say mortification has "set in." All of these terms and phrases are true to the accepted theory of disease, and all indicate the prevailing error. They are based on the false assumption that diseases are entities, each having its special and distinctive form, qualities, laws, properties, and attributes—a real something substantive, of the nature of a noun or pronoun, an enemy to life, and at war with the *vis medicatrix naturæ*.

The ancient method of personifying actions, conditions, qualities, good, evil, truth, falsity, strength, knowledge, passions, etc., has, in modern times, strangely degenerated into a recognition and treatment of the things personified as veritable realities, ponderable or imponderable, instead of glittering generalities or philosophical allegories as originally intended. This is why medical science is so im-

perfect, and the healing art so uncertain. Indeed, this is the explanation of the fact, that, notwithstanding the accumulated lore of three thousand years, physicians were more successful in the management of ordinary diseases in the days of Hippocrates than they are at present.

One of the subjects to which these remarks apply is that condition of "disordered physiology" termed a "cold." What is a "cold?" Everybody speaks of it as an acquisition, or imposition; a something that we have obtained, or that has taken up a "local habitation and a name" on or within us, or that, in some strange manner, has possessed or "obsessed" us. When sick of a cold we have a vague idea that something not of us is somewhere within us or all through us, and somehow doing something that is destructive to the vital machinery. We say we have "taken cold." We might as well say that *cold has taken us*. Neither is true. It would be much nearer the truth to say that we have *taken heat*. How awkwardly "I have caught a very bad heat" would sound! But only because the expression is unfamiliar. It is not scientifically correct, but much nearer scientific truth than the every-day phrase, "I have got a severe cold."

We are all sufficiently familiar with the *diagnosis* of a cold—the symptoms and feelings which constitute its phenomenology: a sore nose; a disposition to sneeze; a tenderness of

the eyes; a heaviness of the head; a neuralgic numbness of the scalp; a tickling in the throat; more or less inclination to cough; stiffness in some of the muscles; an all-over sense of weariness, and, in bad cases, running at the nose and violent cough, with more or less feverishness and chilliness promiscuously interblended.

Now, what is the rationale of these symptoms and the condition which induces them; or, as medical writers are accustomed to phrase it, "the pathology of the disease?"

The whole explanation is deducible from the fact that we have overheated ourselves after being preternaturally cooled; or, in less technical parlance, the transition from cold to heat has been too sudden, that is all. If we should be cooled down to any degree, even to the freezing-point, or anywhere between 32° and 98° Fahrenheit, and kept in that condition, we should never have a "cold." We could not possibly, under such circumstances, "get a cold," nor would "a cold" get us. We could not "catch" it, nor would it catch us. We should be cold, but, paradoxical as it may seem, we should not have "a cold." We might die; we might freeze to death; we might cease to live, because of cold, but we should not have any disease whatever. A frog may be frozen as hard and stiff as a cake of ice, remain so an indefinite time, then be thawed out again, and leap about as lively as ever, without the slightest symptom of having taken "a cold." So we see that the rationale of "a cold" is not to be found in mere cooling, nor heating, nor in both, but in something very different—a statement that applies to all the maladies that flesh or bone is heir to, as well as to "a cold."

Cold, therefore, is not disease, but "a cold" is. Cold is only a diminution of heat, and heat is only a mode of motion. To become cold is merely to lose a certain amount of heat—molecular motion. It is with the living organism as with all other material substances, so far as the "Correlation of Forces" is concerned. If the stove in your room is cold, it is because the particles of iron which compose it move very slowly. Increase their velocity a little by starting a fire in it, and the metallic atoms revolve more rapidly on their axes. The cold stove becomes warm. We say the *latent* heat has become *sensible* heat. Tyndall says "tremulous molecular motion." Add fuel to the fire, and the "latent" heat becomes still more "sensible." The ferruginous atoms move still faster. "Molecular motion" now, instead of

being moderate or "tremulous," is violent. Increase the fire still more, and the stove becomes red-hot. Molecular motion is now very rapid, and the particles of the stove recede so far from each other that the stove becomes porous to certain gases. Then it is that, in the ordinary coal stove, carbonic oxide, a deadly poison, passes through the seemingly solid sides of the stove as water runs through a sieve. Then it is that, unless the room is unusually well ventilated, you are sure to be poisoned with irrespirable gases. And this is one of the many ways of "taking cold."

But, having got the cold, what is it? It is, simply "capillary congestion;" that is, an over-distention of the blood-vessels of the part which is said to be the "seat" of it. "Cold in the head" means congestion of the *Schneiderian membrane* which lines the nostrils to that degree that heat and pain result when the mucous membrane is properly said to be *inflamed*. The difference, therefore, between a local "cold" and a local inflammation is only a difference of degree. It would be just as proper to term inflammation of the lungs (pneumonia) "cold in the chest," as to apply the phrase "cold in the head" to inflammation of the mucous membrane of the nose. In strict medical parlance, when the capillary vessels of any organ or part are disproportionately filled with blood (overloaded), the term *congestion* may be applied. If the part so affected is painful, the word *irritation* is employed. And if the part is painful and hot also, the term *inflammation* is used. These terms, therefore, mean simply different degrees and conditions of obstruction in the capillary blood-vessels.

Now, "colds," however caused, differ in the manifestations of their symptoms according to the conditions of the various organs of the patient at the time of "taking" it. One who is very plethoric may be "struck" with apoplexy or palsy; one whose blood is very foul may be "attacked" with typhoid fever; one whose joints are obstructed with earthy or saline particles may be "seized" with rheumatism or gout; one whose bowels have long been constipated may have a "touch" of dysentery, or a "run" of diarrhea; and one whose liver has long been torpid may have a bilious "turn," provided, in all cases, the exposure to cold, and then to heat, be sufficiently extreme. But if the cause be slight, the effect will be correspondingly light, and only amount to a "common cold," which means a moderately sore nose and a slight degree of feverishness.

PREVENTION OF COLDS.

On the theory above briefly indicated, the plan for avoiding "taking cold," and the best method of treating a "cold" when "taken," are as obvious as simple. First of all, avoid sudden and extreme alternations of temperature; and whenever or however exposed to severe cold, be very careful to warm the body very gradually. Never go very near a hot stove or steam coil because the sensation of warmth is agreeable. A cold part of the body can not be warmed too slowly for the good of the structures composing it. If a part be actually frozen, to thaw it very rapidly would endanger violent inflammation, followed, perhaps, by mortification. The safety of a frozen part is always secured by thawing it as slowly as possible. A part may be frozen and thawed twenty or a hundred times without appreciable injury, if properly managed, as I have repeatedly demonstrated in the treatment of cancers and other morbid growths.

Who ever heard of the explorers of the Arctic regions "taking cold?" Of all who accompanied Buchan, Franklin, Ross, Parry, and Kane, no one was ever sick of a "cold," although living for months and years at a temperature many degrees below the freezing-point of mercury, and subsisting on a dietary that "good livers" in warm climates would regard as extremely abstemious. In 1820, a Mr. Black, of Sir John Franklin's party, traveled alone eleven hundred miles with the thermometer 50° below Fahrenheit's zero. He had only a blanket and a deerskin to sleep under, and was frequently without food for two or three days at a time. Yet he did not "take cold!"

Chilblains are among the familiar examples of the evil consequences of warming the hands and feet too rapidly after having been exposed to extreme cold.

The reason that the hands, feet, and face are more liable to "colds" and their sequelæ than other parts of the body or the internal organs, is because they are more exposed to alternations of temperature, from being more nearly in contact with both frost and fire.

Among the most efficient preventives of "colds" are equable clothing and pure air. Especially is it important to protect the feet. If any part of the system should be disproportionately clothed, it is the lower extremities; but, unfortunately, the feet are in most cases the least dressed of any part of the body. This is more especially the case with women and children, the very ones who are most injured by such disparity.

Any one may observe, on any cold winter day, on any fashionable thoroughfare of any of our large cities (and the fault is nearly as apparent in villages and country places), women and young girls, some of them mere children, so heavily dressed about the hips and abdomen as to cause congestion and weakness in the internal viscera, while the feet and legs are so lightly covered that the blood must constantly recede from them toward the head, inducing chronic inflammation of the abdominal or pelvic organs, and "colds in the head." The consumptive predisposition and diathesis are often wholly attributable to thin shoes and stockings.

A majority of our churches, school-houses, hospitals, and halls are miserably ventilated, as are all of our theaters, and, in the cold season, all of our railroad cars. Nothing more effectually prepares the system for "taking cold" than foul air. It is the rule with all the civilized nations of the earth (and the same is doubtless true of all barbarous and savage tribes), that "colds," coughs, catarrh, bronchial affections, and pulmonary consumption prevail in precisely the same ratio, other things being equal, that the people live indoors. The more they live in the open air the less are they affected with this class of ailments. Where one case of consumption, or even "a very bad cold," can be found (in proportion to numbers) among wood-choppers and lumbermen who "shanty out" all winter, and sleep in "shebangs" through whose crevices the cold winds and colder snows have free play, a hundred occur among the sedentary occupants of well-warmed but ill-ventilated houses.

In order to prevent "colds" it is never necessary to be uncomfortably clothed, nor to be kept in rooms of an unpleasant temperature. Indeed, the more agreeable to the feelings the temperature is the better, provided it is made so without vitiating the air we are obliged to breathe. Fire and clothing may always be used to the extent demanded by the most pleasant bodily feelings, provided there is an abundant supply of pure, fresh air. But many persons, in the arrangement of their rooms, and many builders in the construction of their houses, try to keep the apartment swarm by *shutting the cold out*. The principle is wrong. Whether the room be cold or warm, pure air must be respired in sufficient quantity to aerate the blood, or the whole mass becomes foul, and all the secretions defective or depraved. Nothing renders persons more susceptible to "take cold," be "attacked" with rheumatic

affections, be "seized" with typhoid pneumonia or influenza, and to have "seated" inflammations and "running" fevers, than the foul blood resulting from bad air. A truly Hygienic method for warming and ventilating houses is still among the desiderata of social problems.

Bathing, as a preventive, is all that has ever been claimed for it, provided it is employed hygienically. But in this matter many persons spoil a good thing by overdoing, as they do gymnastics, or as one might spoil a good dinner, or the good of a dinner, by eating too much of it. On the theory (perfectly true) that water is cleansing, and that cold water is tonic, some persons (and some doctors, too) have brought Hydropathy into disrepute, and themselves to invalidism, by cold ablutions in colder rooms in the coldest weather. Here, as everywhere else in the Hygienic system, the golden rule is, *Make yourself comfortable*. A warm, tepid, or cool bath, once or twice a week, or even daily for some persons, may be advantageous, provided it is taken in a room which is comfortably warm, and when the stomach is empty.

TREATMENT OF "COLD."

The curing of a "cold," or rather of the person who has it (I do not believe in curing diseases; when treating the sick I endeavor to cure *persons*, not *diseases*), is always an easy matter, provided the patient will "cease to do evil" for a day or two. In sparsely populated places and very new countries, where apothecary shops are unknown and doctors not to be had at any price, "colds" are successfully medicated by means of foot-baths and warm herb teas. It matters little what particular herb is employed—sage, tansy, catnip, balm, elecampane, boneset, crawley, hemlock, mayweed, fennel, dill, asparagus, or parsley—so that it is not appreciably poisonous. The "virtue" seemed to be chiefly in the warm water taken into the stomach and applied to the feet. When the throat was sore, or a cough troublesome, a stocking (one that had been worn during the day and had thereby acquired some mysterious medicinal property was generally preferred) was worn around the neck during the night. This treatment was always efficacious; that is to say, all of the "colds" were sooner or later removed—none of the patients died. Whoever heard of an "ignorant nurse" or an "old granny" killing a patient by curing a cold? Yet, under the scientific practice of regular physicians, such things happen every day in the year.

But although these domestic simples were not very bad, the Hygienic or no-medicine treatment is better still—positively good. It not only lets the patients get well, as do the herbs aforesaid, but it assists them to recover, as the medicaments aforesaid do not.

The best management of a case of ordinary "cold" is to abstain from all ingesta in the shape of food, drink, or medicine for twenty-four, thirty-six, or forty-eight hours, according to the severity or violence of the "attack." Usually one day is sufficient. If there is much thirst it may be appeased with sips of water frequently taken; but the quantity swallowed should be very moderate, so as not to arrest the process of depuration, which is curing the *patient* by removing the cause of the "cold." Meanwhile the patient should keep quiet and in an equable and agreeable temperature, with abundance of fresh air to breathe. If he is chilly, stiff, rheumatic, or neuralgic, a warm bath or a vapor bath is useful. It should not be prolonged more than twenty to twenty-five minutes. There is not much to choose between warm and vapor baths to "break up" colds (which means, to cure *the patient* so soon that inflammation or fever will not "supervene"), but it is important that the patient be not excessively heated with either process. By overheating the surface the existing capillary engorgement is increased, the patient uselessly weakened, and the effects of the "cold" in various ways aggravated.

If the patient is feverish (having passed the stage of rigors or chills), nothing is better than the wet-sheet pack for an hour, provided it is judiciously managed. The sheet may be dipped in warm, tepid, cool, or cold water, as either may be most agreeable to the sensations of the patient. But when the wet sheet is impracticable, the next best thing is the tepid or moderately warm bath—90° to 95°—prolonged for thirty to forty minutes. When there is much headache, or congestion of the lungs (indicated by laborious respiration), or a diffused feeling of soreness through the chest, the warm hip-bath and the hot foot-bath should be conjoined.

For the irritating cough ("barking"), that is so harassing to many patients, nothing is better than frequent small draughts of warm water; and when the throat is inflamed, or the tonsils swollen so that deglutition is painful, a wet napkin covered with a dry cloth should be put around the neck, and worn until relieved, re-wetting the cloth as often as it becomes dry. It should be wet in cool water.

When the muscles of the neck are stiff and lame, or the intercostal muscles so tender that it is painful fully to inflate the lungs (a condition often mistaken for pleurisy), fomentations should be applied until the symptoms are relieved.

Among the remedial agencies not to be despised in the treatment of "colds" are *respiratory exercises*. The patient should lie flat on the back, the head raised a little with a small pillow, and in this position practice

deep and full inspirations and expirations, expanding the lungs as much as possible without pain or fatigue. Those who have never tried this "movement-cure" process may perhaps be astonished at the facility with which it will relieve all the bad feelings and symptoms. If adopted in the incipient stage of an "awful cold," and vigorously employed for ten or fifteen minutes, once in an hour or two, it will prevent any dangerous degree of congestion of the lungs, and thereby obviate the supervention of bronchitis or pneumonitis.

RAZY RULERS.

THE plea of insanity, in extenuation of criminal acts, has become so common of late, that society is startled. Rich bankers, who are quite sane on other subjects, are found "going wild" on money-making. The case of young Ketchum is in point. One needs a "level" head who handles millions daily in times of exciting speculations. This young Quaker became so completely absorbed, we may say bewildered, that he committed an act which sent him to State's prison. Before, at the time, and ever since, he has exhibited no unusual symptoms or aberration of mind on other subjects. Was he not warped? and did not the whole community pity more than they blamed? McFarland had become so morally obtuse, from one cause or another, that he committed an act not at all in keeping with his natural or former disposition. We are not apologizing or justifying, but *accounting* for these actions.

Consider the asperity manifested by religious zealots and partisans. Professed Christians there are who hate and persecute each other with anything but a Christian spirit of tolerance. Are they not just a little warped? Are not High Church and Low Church extremists off the track? Are not the differences between New School and Old School, Close Communion and Open Communion, carried to almost insane extremes? Do not Mormons, Spiritualists, Communists, and other bodies, exhibit signs of insanity? Are there not crazy phrenologists who ought to be placed in asylums? Yes, and politicians, too. Was not Napoleon I. insanely ambitious? and Napoleon III. imbecile? How many neglected or deserted wives become heart-broken and insane? It is in the *Old Country* that one

may meet with dozens of this class. Tricky husbands go to the Colonies or to America, leaving deserted but trusting wives and children to fill poor-houses, asylums, brothels, or prisons, and in the new countries the runaways form new attachments, and forget those who supposed themselves to be "the loved ones at home." Dr. Beard compiles the following record of insane rulers, which is in point:

"Much of the tyranny and despotism of the world have been the result of cerebral disease, and if justice had been done, not a few of the rulers of history would have been confined in asylums for the insane. [There were no asylums then, insanity was not understood.] Caligula, the beastly Roman emperor, was certainly a lunatic. His accession to the throne was greeted with joy by the Roman people, and he afterward became so popular, by the generous and conciliatory acts of his reign, that, when he was attacked with sickness, sacrifices were offered in the temples for his recovery. His brain undoubtedly became diseased during his sickness [Why not call it by its right name, "dissipation?"] for from that time he became a changed man. The remaining four years of his reign were disgraced by some of the most unnatural and capricious tyranny recorded in history. [Caused by drunkenness.] He put to death a large number of his senators. Every ten days he delivered human victims to be devoured by wild beasts, and jocosely termed this horrid act 'clearing his account.' He caused divine honors to be paid to himself, in a temple erected especially for that purpose, and under the superintendence of priests of his own appointment. [Poor fools, all.] He invited his favorite horse, Incitatus, to dine at the royal table, where he was fed on gilded oats and drank wine from jeweled goblets, and but for his premature death this animal would have been raised to the consulship. In a more enlightened and liberal age Caligula would have been deposed and sent to an insane retreat. The Romans endured his cruelty for four years, and then put him

to death by a well-planned and successful conspiracy. The career of Nero was somewhat like that of Caligula. In youth, he was notably talented, kindly, and amiable, and for the first five years of his reign he ruled with clemency and justice. He was at that time so harassed by the attempts of his mother to wrest the scepter from his hands, that his brain probably became distorted, and he was metamorphosed into a tyrant. [For which his organization fitted him.] He poisoned his own brother at a feast to which he had invited him. His mother, Agrippina, he murdered in her own bed. He relentlessly persecuted the Christians, on the plea that they had set fire to Rome. He caused to be executed Lucan the poet and Seneca the philosopher, and kicked his own wife to death. Nor was his insanity manifested by acts of cruelty alone. He had a silly rage for music, and in his morbid ambition to be thought the greatest singer of the world, he appeared on the stage in the character of an operatic performer. [Another exhibit of the drunkard he was.]

"Domitian, Heliogabalus, and possibly also some of the tyrants of Rome, must have been of unsound mind. Domitian, like Caligula and Nero, began to reign with generosity, but under the pressures and worryings of government he developed into a monster. Heliogabalus made his horse consul, appointed a senate of women, forced the Romans to worship a black stone, and prepared golden swords and daggers, and cords of silk and gold, in order to put an end to his own life whenever he saw fit. All these were the freaks of a madman. Alexander the Great behaved like a lunatic in the latter days of his reign, and the supposition is plausible, that if he had survived a few years longer he might have become a most implacable and capricious tyrant [and imbecile]. From being very abstemious he gave himself up to debauchery. His lust for power became a disease, and he strove for gigantic impossibilities. Robespierre and some of the other leaders in the French revolution were probably made more or less insane by the exciting events in which they took part. It is certain that Robespierre was naturally kind-hearted and considerate, for he begun life by endeavoring to procure the abolition of capital punishment.

"Louis XI. of France was insane both in his despotic cruelty and in his caprices. He shut up his nobles in cages or hung them on the trees of the forest. He lived in constant fear of death, kept in seclusion in his castle, was on intimate terms with his hangman, amused himself by watching battles between rats and cats, drank the blood of young children, and tried various and abominable compounds in order to lengthen his life. [Cautiousness and Destructiveness very large.]

"Jeffreys, the notorious English judge, was a raving maniac; and that he was allowed to preside at the circuits is a severer comment on the scientific ignorance than on the political cruelty of the age. [They did not then understand Phrenology.]

"We are compelled to believe, also, that Queen Christina of Sweden, who murdered her paramour, was in a morbid mental condition when she committed the deed; and on the same theory I account for the hideous and feminine cruelty of Catherine de Medici.

"Of the insanity of Frederic William of Prussia I have already spoken; but his unnatural and whimsical treatment of his son and family was only one of its symptoms. He was inconsistently avaricious, scrutinizing every household expense with absurd attention, and lavishing fortunes on his army of giants. He would run through the streets caning the loungers and workmen who fell in his way until they roared for mercy.

"Theodore, the late king of Abyssinia, was clearly a madman. All accounts agree in representing him as being first a just, considerate, as well as enterprising ruler; but under the excitement and anxiety of domestic afflictions and the rebellions that took place in his realm, he became changed to a monster, like the Roman emperors Nero, Caligula, and Domitian. The latter acts of his reign gave every evidence of a disordered brain.

"Fortunately, our own country has thus far been mostly free from the rule of partial lunatics. Whether the inconsistencies of President Johnson's administration are due to cerebral disease or to native obstinacy, prejudice, and ignorance, can not, at present, be well determined."

[So much for so much. Is it not evident that high living, trouble, vexations, disappointments, neglect, and the excitements of speculation, gambling, etc., produce insanity? Are not the great medical quacks of the day more or less *non compos*? and these dashy railway monopolists as well as the erratic aspirants for high official positions? Are there not many Daniel Pratts, only a little less pronounced? The infirmity takes a religious turn in one, an affectional in another; it is aspirational or ambition in one, miserly in another; mechanical—perpetual motion—in another, and tends to theft, robbery, violence, or murder in another. There are as many phases of insanity among men as there are groups of phrenological faculties. Show us a perfectly circumspect and consistent man, and we will show you a perfectly sane man.

A good parentage, or the inheritance of a sound and well-formed body and brain, with good living, right training and a proper education and development of the whole being—a right life, with not too much nor too little work in it; right social relations and a true religion evincing faith, hope, and charity, will give a man the best protection against that dreadful and constantly increasing infirmity, *INSANITY*.]



NEW YORK,
JANUARY, 1872.

OUR OBJECTS.

NEW readers will naturally inquire, What are the specific objects of this JOURNAL? What does it propose to teach? A general answer is given in the PROSPECTUS. Former readers are familiar with our plans, purposes, and teachings. They accept our platform without fear of being misled by erroneous theories or doubtful statements of fact. The following are among the topics deemed useful and important for all to understand:

ORIGIN OF RACES.

Where did we come from? Whither do we tend? In the study of ETHNOLOGY, or the Natural History of Man, we find illimitable fields for research and exploration. With each successive decade we are enabled to report "progress" in this department, although we may never attain to a full knowledge of the *origin* or the *destiny* of the race of man. Whatever discoveries may be made; whatever is newly developed on the subject, will be recorded in these pages.

THE HUMAN BODY.

In the department of PHYSIOLOGY we seek to describe the different bodily organs, such as heart, lungs, stomach, etc., with their several functions, with a view to their proper use and healthy action in the generation of vitality or the principle of life. There is a reciprocal action of body and brain, and to have sound minds

we must first have healthy bodies. We propose to show how.

HEALTH AT HOME.

Are we well? or are we ill? Do we *enjoy* life? or do we *endure* it? Good digestion, good circulation, good breathing powers, sound sleep—"Nature's sweet restorer"—and other conditions, depend largely on ourselves,—on how we live. It shall be ours to point the way—through the JOURNAL—to correct physiological habits, so that each reader may live in accordance with the laws of his being, and with his own highest health and happiness.

THE HUMAN BRAIN.

What of it? Is it the organ of the mind? Do we think, feel, enjoy, or suffer through these nervous centers? Are different portions of the brain allotted to perform different functions of the mind? Is the forehead, back-head, side-head, and top-head one inseparable mass? or is it like other parts of the body, divided into separate organs? We see through the eye, hear through the ear, smell, taste, feel, etc., through special organs. Then why not separate organs or nerves for speech, color, music, imitation, devotion, construction, etc.? Can these organs be cultivated, strengthened, enlarged? or if too large, can they be restrained or controlled? Yea, verily; and we are accountable for the right or wrong use of the same. Insanity, imbecility, and other mental infirmities come through diseased brains; while those who rise to eminence, and turn all there is of them to good account, have brains, bodies, and minds properly developed and in harmonious action. This JOURNAL considers all questions relating to the subject.

READING FACES.

That "THE SIGNS OF CHARACTER" have their external marks and locations in the "human face divine," that a SYSTEM of PHYSIOGNOMY based on Anat-

omy, Physiology, and Phrenology has been established beyond controversy, no one who has studied the subject can doubt. But though we do know what we claim to be true, there is much yet to be learned. This field is being explored by earnest workers, and every ray of new light will be heartily welcomed by JOURNAL readers who would know how to read the motives of strangers at a glance.

EDUCATION.

Not only intellectual, but physical, social, and moral. We must call out—develop—the whole man if we would attain the best results. “Cultivate the physical exclusively, and you have an athlete or a savage; the moral only, and you have an enthusiast or a maniac; the intellectual only, and you have a diseased oddity—it may be a monster. It is only by training all together—physical, the intellectual, social, and spiritual—that the complete man can be formed.”

CHILDREN.

Besides the best parental training at home, children require the best training and discipline of the schools; and here such appliances should be found as shall quicken, strengthen, and call into action every nerve and every muscle of body and brain. So in our asylums, prisons, and reformatories, means—educational—should be adopted by which pauper, imbecile, or culprit shall be *improved* while in restraint, so that when set at liberty he may become self-controlling, self-regulating, and self-supporting. These are some of the objects of the kind of education which we seek, through this JOURNAL, to establish.

OUR COUNTRY.

All things looking to improved methods in agriculture, manufacturing, commerce; in education—secular and religious; in art, and in the dissemination of general intelligence; in migration and in

emigration; in the settlement of our wild lands; in railways, canals, the opening of rivers and harbors; in cheap postage, cheap transportation of freight; in opening up our mines of coal, iron, lead, copper, silver, and gold; in the improvement of our domestic animals; our fruits, grains, roots, and other productions; in short, we take a lively interest in all things going to develop any and all interests for the building up of a great nation of free, intelligent, honest, patriotic, American citizens. This JOURNAL shall be the exponent of no particular sect, clique, or party, but of all who love God and their fellow-man, and who will make any personal sacrifice for the maintenance of good government and the building up of our American republic.

SCIENCE OF THE SOUL.

Our studies begin with the material part of man, and end in the spiritual. 1st. Anatomy, or the General Structure, being the basis. 2d. Physiology, or the Vital, life-generating organs. 3d. Phrenology, or the Brain and Nervous system—taking in Physiognomy; and so on up through the mental into the spiritual, culminating in PSYCHOLOGY, the Science of the Soul. Beyond this, mortal senses can not reach. This brings us into close relations with the Creator; *en rapport* with Deity; face to face, as it were, with angels and with God. Our studies lead to this, and leave us here in the realms of the prophetic. We go through life, from earth to heaven,—if we go according to the Divine will—passing through the different stages, from the bud of childhood through the flower of youth into the ripe fruit of maturity, culminating in the spiritual. Thus we go from the cradle to the grave, thence to the abode of angels and archangels, where the good shall dwell with God evermore.

To all these subjects this JOURNAL is specially devoted.

POLITICAL RINGS.

THE worst feature of the frauds practiced on a people by infernal political fiends is the general demoralization their example effects on weak and undeveloped minds throughout the whole country. It is well known that there is everywhere a class of persons so weak in morals that they only await an opportunity to show the cloven foot. If a fire occurs, or a railway train runs off the track, these human hyenas will be found on hand ready to steal, rob, and murder. When exposures of great public crimes occur, like those of the late Tammany political ring, this large class only regret that they were not in it, that they, too, might also have fattened on the plunder.

The late civil war, which grew out of a great wickedness—"the sum of all villainies"—lowered the tone of public morals very much. Life on the battlefield, in camps, prisons, and other uncomfortable places, led the weak to drinking, gambling, profanity, and to actions much worse, and at the close of the war there was let loose on the community a horde of "hard cases." These have been absorbed into society, and we are now reaping the fruits thereof.

TRUE DEMOCRACY is not for thieves, vagabonds, paupers, nor for the ignorant. It is for intelligent and self-regulating citizens, each of whom is supposed to be "a law unto himself." The low, ignorant, and the bad need the restraints of absolutism—a monarchy. Why is it that the French can not or will not support a republican form of government? It is said to be because her people *are not yet capable of self-government*. Hence they must be governed by police, backed up by the bayonet and the guillotine.

We have now in America numbers of ignorant natives of all colors, and a large foreign population to be educated, fitted, and finally absorbed into the body pol-

itic, and converted into self-regulating citizens, or else consigned to the asylum, poor-house, or prison. Such only as come under our laws, support the flag, and become citizens have any rights here. We would require every man—not imbecile, insane, criminal, or idiotic—to take part in the municipal, State, and national affairs, whether he be Shaker, Quaker, or Communist. *All* who enjoy the privileges of our free institutions should be required not only to pay taxes, but to *vote* and to *fight*. Let men be MEN, and not erratics or Miss-Nancys.

We want no more abnormal specimens of humanity, but only sound, healthy, lusty, honest, intelligent, patriotic, godly citizens—a race commensurate with our high privileges for *highest* development. Why throw away our great, our grand inheritance? or suffer our liberty to pursue our vocations untrameled, to educate our children in freedom, and to worship God according to our own consciences, to be usurped or perverted by rogues or by a religious hierarchy, or by any imported ideas which are inimical to our institutions, and designed to thwart our most cherished objects? If "eternal vigilance be the price of liberty," it behooves every citizen to watch, work, and "pray without ceasing" for the preservation of the God-given privileges which have been vouchsafed to us, and which are threatened by corrupt politicians, designing and crafty parasites, and by a host of miserable whisky-drinking devils in human form. Let the Rings be broken, and the remnants burned in a righteous public indignation. Americans, VIGILANCE is the watchword!

CHARLES P. DALY, LL.D.—Shortly after the biographical sketch of this gentleman was stereotyped for our December number, he was unanimously re-nominated by the different political parties as a candidate for re-election to the judicial office he has so long and honorably filled, and was as unanimously re-elected

by vote of the people for a further term of fourteen years, commencing on January 1st, 1872, and ending with the year 1885. At the expiration of that time, should he live so long, he will have filled a continuous judicial term of forty-one years, as he has occupied that office since January, 1844, a remarkable length of time, the political affairs of New York considered.

DRUNKEN LEGISLATORS.

THE shame and disgrace of Government—State and national—are drunken legislators. It is notorious that sober, temperate men are the exception among our members of Congress, and also in many of our State Legislatures. And *these* are the men who make, break, and pervert our laws; who, filling places of trust, are *easily corrupted*, and so bring disgrace on our democratic republican institutions. Men who can not, will not, or do not control their own appetites and propensities are permitted to fill places of trust while they do not control or regulate themselves! How preposterous! Is there cause for surprise at the predictions so often expressed, that we—our American institutions—are going to the dogs? Can a drunken man be trusted to navigate the ship of state when he would inevitably run on the rocks or reefs, and strand his ship, and sink all who were so unfortunate as to be with him? And yet we *do* elect and trust just such drunkards to be our captains. Why? Are there not enough clean, honest, and intelligent men to serve us in these respects? Would we suffer our personal business interests to be thus jeopardized? Would we employ for clerks, salesmen, bookkeepers, or cashiers habitual or even occasional drunkards? If we did, we should deserve the fate we courted or tempted. No. For our personal confidential servants, we should take care that they were altogether trustworthy and self-controlling. We should require them to be above suspicion, and

on the first drunken spree would throw them out of place, not to be trusted more, until the evidences of reform were unmistakable.

Citizens have been criminally careless. They have not attended to the selection of the **BEST MEN IN THE NATION** for the most important and **RESPONSIBLE OFFICES IN THE NATION**, and hence our present disgraceful dilemma. But the ship of state has not yet foundered; she has encountered fierce storms; has been in imminent peril; on her beam-ends; but by the temperance, intelligence, and good management of some of her officers, and by the grace of God, she righted, and rode out the storms. Let us not again put to sea with unworthy seamen. We can have the best as cheaply as the worst, and in the end they prove much cheaper; for in the latter case there will be no plundering, stealing or robbing, and we shall not live in the constant fear of shipwreck.

"Weed them out." In all communities, in all societies, among all bodies of men, there will be found moral delinquents, intellectual imbeciles, and social lepers. They must be weeded out and cast aside, lest they choke or contaminate the true and the pure. Then look out for the future, to see that only good men be chosen to represent us, make laws for us, and attend to our public affairs. We want only *trusty, temperate, capable, and judicious* servants, and if we are wise we shall have them. Let no more drunkards, corruptionists, public thieves, libertines, or vagabonds disgrace us or our legislative bodies.

THE WORLD'S PROGRESS.

IT is encouraging to believe in **PROGRESS**; discouraging to believe in **retrogression**. Young blood, ever hopeful, energetic, and enterprising, believes in "**THE ONWARD AND UPWARD**," while the used-up, worn-out, dissipated, and dyspeptic look through jaundiced eyes,

and declare the world going backward and downward. So of those without Hope, and with excessive Cautiousness, which gives every thing a dubious aspect, and inclines them to timidity and despondency. If such a spirit is admitted into the pulpit, he pictures the tortures of hell, and dwells on dangers, rather than the beauties and the joys of heaven. We have but little patience with constitutional croakers, but great faith in the future, and in the goodness of God.

Here is a brief oration, from the *Art Advocate*, which expresses the true idea in regard to the world's progress.

"Progress is the watchword of the universe. Its impress is stamped alike upon things, both human and angelic. All creation must obey its mandates, or succumb to the inexorable law of decay. Nations must heed its warning voice, or be swept into the realms of oblivion. Individuals must follow in its pathway, or sink beneath the power of its opposing arm.

"When the Omnipotent hand placed man in the garden of Eden, 'Onward' was written indelibly upon his forehead. With that as his motto, he was to go forward to the conquest of the world, and time attests how well he has succeeded. To-day all nature bows in supplication before him. The gods of earth, air, and water hear his voice, and rush to do its bidding. He speaks, and the ferocious beasts of the forest cower at his feet. He commands, and the forces of nature obey. He directs, and the rains and falling waters do more than half the work necessary for providing food and clothing for the human race; and, under his supervision, the howling winds of the ocean, the very emblems of destruction and terror, propel his ships through the waters of the 'briny deep.'

"Most nobly has he obeyed Heaven's fiat of progression. Look at the vast strides which he has made in the journey of civilization. Eighteen hundred years have passed away since a new era in the history of the world began. Cities have been leveled to the ground, nations humbled to the dust, empires swept away, and continents despoiled by the hand of the ruthless invader; yet this lapse of ages, these changes, these mighty revolutions, and these terrible despoliations have only served to brighten the hemlet that dons the head of advancing civilization.

"Difficulties which were once thought to be obstacles impossible for it to overcome, now lie struggling at the feet of the victor. Landmarks which were once thought to be limits beyond

which it could not progress, are now being rapidly left in the distance. Its advancement, though stopped for a time by the blighting, desolating deaths into which nations have been plunged, has never ceased. Though stifled for a time, by the hand of some despotic ruler, its flame has never been suffered to go out; but overthrowing the hand which sought to hold it down, it has again taken its place in the race, only to advance more rapidly because of its long confinement.

"If vast pyramids of monumental marble were to be reared, civilization has reared them. If the mystic veil that hides from our view the secrets of the universe were to be torn asunder, civilization has torn it asunder. If the world were lying in ignorance and stupidity, and printing were to be invented, civilization has invented it. If the rapidity of traveling were to be increased, and railroads were to be constructed, civilization has constructed them. Whatever man, in this world of necessity, needed for his comfort or convenience, that civilization has supplied him with. See, adorning the bright pages of science, the three noble achievements of the nineteenth century.

"Astronomy is daily unfolding fresh marvels to the eye of its votary; the wonders of the starry firmament bid him behold the glories of other worlds than ours. Geology is opening to our view the mysteries long hidden by the veils of ignorance. Chemistry is bequeathing to the human race the rich legacies of science. Botany is directing our gaze to the mysterious labyrinth of the vegetable kingdom, and Philosophy pointing us to the road that leads to ease and comfort. In art, the colossal statues of ancient Greece and Rome are being surpassed by the monuments that now adorn the last resting-place of many of earth's noblest sons.

"But turn from these fields, of literature science, and art, and behold the towering form of Christianity! Hand in hand with Civilization, she is advancing on to the conquest of the world. 'Progress' is stamped upon her banners, and 'Onward' is her battle-cry. Pagan gods hear the tramp of her armed millions, and rouse themselves for the contest. Heathenism catches sight of her time-worn banners, and shakes itself for the fray. But all in vain! They grapple with a foe that is invincible! Before the mighty power of her arms, pagan gods and heathenism must all be swept into the gulfs of oblivion, and civilization and religion triumph over the powers of darkness.

"Nations, too, have heard the voice of that

mighty sovereign, Progress, and obey. Four centuries ago, America was a howling wilderness. The red man trod the hills of New England with all the dignity and freedom of a monarch, and wild beasts had their haunts where temples now rear aloft their proud and stately steeples. In 1499 the first white man landed on that coast. Two hundred and seventy-six years afterward, the thirteen American colonies proclaimed their independence. Eighty-nine years have passed away since that time, and now, instead of thirteen, *thirty-four* stars are engraven upon the national emblem. Westward the star of the empire is taking its way, and soon, from the icebergs that line the coast of British America, to the tropical region of Yucatan, the American flag will wave in triumph.

"Such is the progress of the age. Nothing can remain stationary. Life is but one continued chain of progressive links. Each age is in advance of its predecessor; and when the river of death shall be crossed, and the last victory won, the motto through the countless ages of eternity will still be 'Onward.' Let that motto be our motto. Let that watchword be our watchword. And when life's drama with us shall have been closed, and these tenelements of clay shall have been exchanged for the robes of immortality, then can we exclaim with the dying Christian, 'Oh, death! where is thy sting? oh, grave! where is thy victory?'"

OUR FALL CLASS, 1871.

AT the conclusion of our recent annual term, the following testimonial and resolutions were presented by the members. We print them, by request, as written, and beg to express our warmest thanks for the hearty words of approval and encouragement which are so cordially expressed.

Whereas, we, the members of the Phrenological Class of 1871, have attended with great pleasure and profit the thorough and complete course of instruction in Theoretical and Practical Phrenology and Physiognomy, therefore

RESOLVED, That we most heartily congratulate the proprietors—*First*. On the existence of the Institute; *Second*. On the able manner in which it is conducted; *Third*. On the ample facilities they enjoy for expounding and illustrating the subjects taught; *Fourth*. On their zeal and energy in keeping the true science of man before the public in the face of all opposition; *Fifth*. On the growing popularity of the Institute, and *Sixth*. On the incalculable benefits that we, in common with those who have preceded us, have received from the course of instruction.

RESOLVED, That we commend the Institute, with its able teachers and most ample facilities,

to all lovers of the Science of Man, and to all who wish to qualify themselves for usefulness as practical phrenologists.

RESOLVED, That we recognize in Prof. S. R. Wells an excellent physiognomist; in Prof. Nelson Sizer a most able, thorough, and comprehensive lecturer and examiner in Phrenology; in Dr. Nelson B. Sizer an excellent physiologist, and an efficient demonstrator of the human brain, and in Prof. J. E. Frobisher an accomplished elocutionist.

RESOLVED, That we tender to each and all of the teachers our most hearty and sincere thanks for the kind, able, and gentlemanly manner in which they have conducted all the exercises.

RESOLVED, That while we go to our respective fields of labor, we extend to the proprietors of the Institute our most cordial sympathies, and pledge them our co-operation in the great work in which they are laboring, and to which they have devoted their best energies—their lives.

ARTHUR J. ALEXANDER, Bloomington, Ind.

P. E. BALLOU, New York City.

EGBERT M. CHESLEY, Bridgetown, N. S.

WILLIAM T. HALEY, Gilroy, Cal.

JAMES HENDERSON, New York.

ALFRED JENNINGS, Massachusetts.

SAMUEL S. MCNAUGHTON, New York City.

PORTER D. RICHEY, Fairbury, Ill.

A. SAELTZER, New York City.

P. TURNER, Gardner, Grundy Co., Ill.

CHARLES S. WIGHTMAN, Davisville, R. I.

NEW YORK, Nov. 30, 1871.

SOUTHERN INVENTORS.

IN the year 1859—one year preceding the war—we visited the Patent Office Department in Washington, and we were surprised to learn how few among the thousands of models received yearly came from the South, and how *many* came from the North. We were told by the Commissioner that less than ten per cent. of the whole number of applications came from the then slave States, and of this small number a considerable proportion were from Northern men residing in the South. We put this question to the Commissioner: "Why is it that Southerners invent so little? Have they less **CONSTRUCTIVENESS** than Northerners?" To which he replied: "No; the one is quite as ingenious as the other; but the one is a planter, and the other a manufacturer. The rudest instruments answer the purposes of his rude agriculture, while the manufacturer needs, and must have, the best mechanism. Again: there is an aristocracy in the South which looks on labor as a punishment rather than a pleasure, and only those work who *must*." But *that* idea or prejudice passed away with

the "peculiar institution," and now a different state of things exists.

The Patent Office records of the present year show a great increase of Southern inventions. Instead of the seven or eight per cent. of 1859, it has now thirty per cent. of the whole credited to the former slave States. Is not this encouraging? Southern gentlemen who had never supposed themselves capable of suggesting a mechanical device, "take to it" as kindly as a natural-born Connecticut Yankee clock-maker. We hope to chronicle great things in this respect now that the best mechanism is to be used in the South. Aunt Ophelia's characteristic expression, "Oh, how shiftless!" will soon become obsolete. Here is a paragraph to the point from the *Artisan*:

"The *Plantation*, a Georgia agricultural journal, in speaking of the dearth of invention hitherto shown in the Southern States, asserts that the 'earth does not hold a more restless, active, energetic, thinking man than the middle-country Southerner,' and that they will hereafter produce, 'in rapid succession, inventions of permanent utility to man.' We are glad to hear this from an authority evidently familiar with the subject spoken of, and in the truths expressed thereby lies the germ of marvelous promise to the South. When the genius of her people shall be turned to the utilization of the minerals hidden, and as yet almost unsought for, beneath her soil, the timber that grows untouched in her forests, and the water-power that now wastes itself in picturesque tumbling over the crags of her valleys, it will take but a little while to attain a thrift, far nobler in itself and more honored by the world, than was ever the luxuriant but idle prosperity of a score of years ago.

"It is especially desirable that the work of devising new machinery to meet the peculiarities of Southern industries should be done by Southern men. The inventive skill of Northern mechanics can supply devices to fulfill any demand with the nature of which they are familiar. But the conditions under which machinery in the region referred to must be used are so different from those obtaining in the Northern, Eastern, and Western sections of the country, that no experience, however thorough, gained in these last

would be of use in elaborating improvements for use in the other. We believe that there is room for hundreds of new inventions applicable to agriculture, arts, and manufactures in the Southern States, and the sooner these are produced by the energy and talent of the people thereof, the better will it be."

UNDEVELOPED POWER.

BY G. H. A.

IN every person with whom we gain an acquaintance, we notice unmistakable evidences of the possession of unused and therefore dormant and undeveloped power.

Many persons are called men or women of "putty," when in truth they are not made of so soft a substance, but are only covered up with it. The power, talent, or ability to be something and to do something worthy of esteem exists in many, but is kept down by circumstances. Regarding ourselves, we know that we are not what we could have been under just the same circumstances in all that adds to personal ability and capacity to do and to be. Others have confessed the same. It is common for weak people to say: "If the circumstances of wealth, health, locality, and time had been differently arranged, we might have been so much more than we are now." This is probably all true. Those circumstances and conditions we are but little responsible for, but for this other circumstance of undeveloped power we are responsible. To-day we remember wherein in times past we did not follow conscience. To-day also we know wherein we suffer the consequences. We have no right to let our talents for right deeds and words remain unused and untrained. Because I to-day am more weak, feeble, and unskilled than I would have been if all my talents had been steadily used, the society in which I move, the communities of which I now form, or hereafter may form, a part suffer in some degree. If I had more effectually trained myself, I could have done more good. Thus much benefit to the world is lost, and he by whose sluggishness it is lost is responsible therefor.

We see it, this unused power, everywhere. In the pulpit, we see it in hymns poorly read, prayers lazily uttered, sermons sleepily preached, and exhortations weakly put forth. In the columns of the daily, weekly, and monthly press we see it sometimes stand out in all the prominence of wishy-washy leaders, milk-and-

water romances, abortionist advertisements, and slandering sensational paragraphs.

On the rostrum struts this beggar, and in hackneyed phrase puts forth his claims to public notice. Undeveloped power crops out from every political office, presides on the bench, argues and pleads at the bar, pedagogues in the school-room, and grows with weeds and thistles and empty purses on the farm. The world to-day needs a science which shall be able and willing to tell every man and every woman just what he or she can do, and do in a manner nearest perfection. We not only need the science, but we need its instructions; and

not only its instructions, but we need to follow faithfully every way which shall tend to develop men and women for great words and grand deeds.

We must bid a God-speed to Phrenology. By every means in our power let us strive to carry its truths to every home and every heart. It tends to teach men all the beautiful truths of love, duty, and faithful obedience. When each shall know just how much power can be developed from his human existence, and shall learn just how to apply that power to the best advantage in the interests of the world's advancement, then will we be very much nearer the millennium.

Department of Literature, Science, Education.

POLITICAL ECONOMY NOT A FAILURE.

"THE EDUCATED MAN IN AMERICAN SOCIETY" REVIEWED.

EDITOR OF THE PHRENOLOGICAL JOURNAL—*Dear Sir:* I have read with interest the extract which you published in your November issue from the able address of Mr. Orville J. Bliss, upon the "Educated Man in American Society." Beneath his earnest sentences I feel a pulse that beats essentially in unison with my own, but I venture to protest against his attacks upon Political Economy. "It is," he says, "a disastrous failure—it has proved itself futile." Again, he says: "I deny to Political Economy a universal mission."

That poverty, monopolies, protective tariffs, strikes, wars, and social inequalities exist to-day in the face of Political Economy, which forbids them all, is certainly true. But not less is it true that in spite of Christianity sinners still roll iniquitous morsels under their tongues with no apparent loss of zest; in spite of the Ten Commandments men steal, lie, kill, and commit adultery. Religion, then, is "a disastrous failure?" Hundreds of years ago Galen and Esculapius headed the crusade against disease, and thousands of successors have continued the contest, and yet, to-day, fevers and colds, and tumors and contagion, decimate mankind. Medicine, then, is "a disastrous failure?" Mr. Bliss proclaims Education to be the grand agent for the amelioration of humanity. For centuries men have been poring over their books. Much study was a weariness to the flesh before the birth of the English tongue. Between the academies of Plato and Socrates and the public schools of America

stands a forest of colleges, universities, gymnasias, and school-houses, guarded by generations of instructors; and yet to-day ignorance is rife. The ignorant not only swarm our streets, but popular rumor has it that the man who has wielded almost despotic power in this community, and the man who plays with railroad corporations as children play with toys, can neither of them pen a grammatical sentence. Education, then, is "a disastrous failure?"

In truth, while Religion, Medicine, and Education continue to battle with sin, disease, and death, I will never proclaim them disastrous failures; and I demand that so long as Political Economy denounces those violations of economic law which cause social disorders, it be recognized as a valiant ally of the social reformer, and not a "disastrous failure."

Men to-day maintain the inequalities which curse England with paupers and palaces; they suffocate the industry of America with monopolies; they antagonize employer and employed, not because Political Economy has failed, but because they fail to practice its precepts. Political Economy, Mr. Bliss says, has had ample trial in Great Britain. Does he mean that all Englishmen, or a majority of them, or even a minute fraction of them, practice its precepts? His own reference to the pernicious laws of entail, succession, and primogeniture, each a direct violation of economic law, negatives any such assertion. The poor-laws of England, cumbrous devices to alleviate the results of economic sins, her partial and

unjust systems of taxation, her privileged classes, her scandalous Irish policy, still bid defiance to the Economist. Has the quaint but admirable slogan of Adam Smith ever yet had ample trial in England? It was "the establishment of the greatest general cheapness (i. e., abundance) and the abolition of monopolies." Bastiat, the most brilliant of all the Economists, taught that "all legitimate interests are in harmony;" that "the gain of each is the gain of all, and the gain of all the gain of each." He said, "Leave, then, laborers and capitalists to regard each other with the eye of envy and distrust." When "ample trial" has been given to these benign precepts of the Economists, I have no fear that the result will be "a disastrous failure."

Those who make such attacks as the above upon Political Economy misunderstand the character of its teachings. They revolt with just indignation against the doctrine that men are governed throughout by selfishness, and that no other motive is needed in social economy. But be it understood the science teaches no such heresy, although it is popularly believed to do so. Even Ruskin, who should know better, reiterates the false accusation. With a flippancy akin to that which proposed the rebuilding of London, the destruction of New York, and, for I ought know, had some relation to the firing of Chicago, he says, in "Unto this Last," pages 1-4: "Among the delusions which at different periods have possessed themselves of the minds of large masses of the human race, the most curious—certainly the least creditable—is the modern *soi-disant* science of Political Economy, based on the idea that an advantageous code of social action may be determined irrespectively of the influence of social affection. * * * * * Observe, I neither impugn nor doubt the conclusions of the science if its terms are accepted. I am simply uninterested in them, as I should be in those of a science of gymnastics which assumed that men had no skeletons. Assuming not that the human being had no skeleton, but that it is all skeleton, it founds an ossifant theory of progress on this negation of a soul," etc.

Let a sentence suffice to show the disingenuousness of these remarks. Man is neither all soul nor all skeleton; his motives are neither altogether sympathetic nor altogether economic; the Church, the family, the market, each exhibit him impelled by different forces. In the first, his soul predominates; in the last, his self-interest, or, to please Ruskin, his skeleton. Let the theologian, or whoever will, study the

first two, the Political Economist chooses the last, but denies neither the existence nor the importance of the others. When physicians may be abused for not attending to the esthetic culture of their patients, you may attack the Economist for not investigating the sympathies. He admits their existence and their effects upon man; but human life is short, and man is not only the noblest study of mankind, but is also the most extensive, and can not be comprehended in one science.

In commerce, industry, finance, tax-paying, and the like, vast fields of human activity, where the sympathies are silent and self-interest predominates, the Economist finds his subject matter. His functions are twofold. First, he must ascertain the laws which operate here, as elsewhere in social dynamics, beneficent when undisturbed by human folly. Secondly, he must show mankind wherein they violate these laws, and how they suffer thereby. These duties Economists have nobly fulfilled, as their writings show. They tell men seeking material welfare, under the impulse of self-interest, that their highest material welfare is to be attained only through self-interest enlightened. Trades-union outrages, commercial extortions, wars of conquest, oppressive monopolies, are of constant occurrence under the stimulance of self-interest, but Political Economy rebukes them all as surely unprofitable in the end. It proclaims that enlightened self-interest will find no gains in the losses of others.

A supposed self-interest led the English Government to establish the East India Company. The keen insight of Adam Smith saw that this monopoly was both solicited and granted in accordance with an unenlightened self-interest. Although it was the most brilliant phenomenon of his day, and was possessed of an extraordinary prestige, he attacked it fearlessly and relentlessly; showed that it failed as a trader, and failed as a ruler, and he proved that its government was mischievous to its subjects, and its monopoly a wrong upon the English people. The result was—British self-interest, thereby enlightened, abolished the monopoly.

I cite the pages of Adam Smith, of Mill, of Bastiat, of all leading writers, to show that Political Economy inspires men, not with a malevolent selfishness, but with an enlightened self-interest which contains all the elements of progress, and seeks its own elevation by paths parallel with the prosperity of others.

Finally, these social reformers, whom God speed, need to be told that what they know of

reform they have learned from Political Economy. This science, which can not yet celebrate its centennial, began that crusade against enforced inequalities which comprehends the schemes of all these reformers. It was the Economist who first peered into the frightful abyss which separates the palaces and the paupers of Great Britain, and it is he who will bridge it over. This is not the fanciful metaphor it may seem; the adoption of a free-trade policy in Great Britain in obedience to Economic teachings has already, in a quarter of a century, reduced the rate of pauperism from 1 in 13 to 1 in 20. Two Economists, Locke and Bentham, demolished the theory of the usury laws, and the general abolition of the other instruments of oppression is now only a question of the growth of intelligence.

We may assert without fear of contradiction that every important social reform which has been achieved during the last century was first proposed by an Economist. The "Wealth of Nations" is pronounced by Buckle to be the most important book ever written. He pays its author this further tribute: "This solitary Scotchman by the publication of one work contributed more to the happiness of man than has been effected by the united abilities of all

the statesmen and legislators of whom history has preserved an account."

Further illustration of the part Economists take in these matters is afforded by the spectacle of John Stuart Mill, England's pre-eminent Economist, heading its most radical reforms. In America we have our own industrial ills, not bodily transferred, as Mr. Bliss intimates, with the immigrant from abroad, but resulting inevitably from our own Economic sins. As he most aptly says, our society fails to distribute fairly its labors and rewards. In our social constitution the element of enforced inequality is as potent, though not as patent, as in the days of feudalism. We no longer hold our liberty and property subject to the will of feudal lords, but in their stead legislators transfer our property to others without our consent. To-day, it is not the sword, but the statute. Monopolies, subsidies, special legislation, land-grants, distress the state. All these Political Economy has long ago denounced. Whatever path the American reformer enters he finds the Economist his pioneer. He finds, too, a remedy prescribed: not monopoly against monopoly, not special privilege against special privilege, not Education, good as that may be—it is Liberty.

HENRY D. LLOYD.

MARRIAGE AMONG BIRDS.

A LOVER of nature, Pastor Snell, of Hohenstein, Nassau, Germany, has recently made some very interesting studies in regard to marriage among birds. According to him all birds, with few exceptions, live in true, lifelong marriage, as can be easily observed among ravens, jays, doves, sparrows, etc. The lark-hawk belongs to the quite inseparable birds in spite of its general wildness. If we see in the autumn, when these rapid flyers go on their wanderings, one of them making his wonderful flights in the air, we shall, as a rule, soon discover his mate. A great many birds flock together in the autumn regularly in great or small bevvies. But it has also been found that the single pairs remain together. There are birds of passage, however, of which the males and females unite in separate flocks, and thus divided make their southward journey. This is, for instance, the case with the bullfinch. In spring, however, the same pair come together again. The male nightingale sings, on the first days of his arrival in spring, so lively day and night, without interruption, in order to call his mate to him, who arrives later, or, since she

knows their home, to announce his presence. The sparrow-hawk meets his mate, in the spring, on the same tree where they took leave of each other the former year, after he has made many cross flights, and perhaps visited the palm-groves of Africa; and they prefer to inhabit the same thicket which they had formerly occupied.

A few birds live in polygamy. Among these are the moor-fowl, the domestic fowl, the duck, the goose, and a few others. The marriage most frequently takes place in spring, when they are a year old, and in it there is shown a very distinct choice, the reason of which is as little to be determined as among us, even though the usual motives of life do not prevail. Often fate alone determines; but when there are many suitors, the strongest has the right. Even when the majority is on the side of the females, which, however, is seldom the case, since with birds there are more males than females, there arise many battles through jealousy. In marriage, strifes do not occur, since the female always submits to the male. The choice of the nest, for example, always falls

upon the male; and Pastor Snell observed, in the case of sparrows and doves, that when the male, from stupidity and anxiety, had chosen an inappropriate place, the female immediately began to carry material thither, although it was nearly impossible to do so. Only with the lark-hawk happen many quarrels over the booty, which, however, never lead to violence. We must recognize among all birds living in a monogamic state the virtue of faithfulness in marriage. Nevertheless, there is a difference to be made between each gender. On the side of the female (says Pastor Snell) I have never, so long and carefully as I have observed birds, noticed any unfaithfulness; and on the side of the males seldom, though it does sometimes happen. If we consider that the females are by nature more shy and timid, we shall find an explanation of this difference. It is easy to discover the formal breaking up of the marriage. This happens sometimes, and is frequently decided on by the female. Among pigeons, such separations only take place when they have been bound together from the commencement, not from affection, but from constraint. In such cases it was therefore from the commencement a *mesalliance*, and the separation takes place because one of the couple

again seeks its former mate, from which it had been separated by the caprice of its master.

Among wild birds such divorces occur less frequently, because with them all constraint is done away with. In the breeding time the females are devotedly supported by the males; among many species the latter sit as well as bring food. As soon as the young come forth, the male has his hands full, for among all birds whose young must be fed, he takes upon himself the business of feeding and rearing them. Among the birds, however, whose young run away from them and eat alone, as, for instance, the partridge, the male has to lead them to the appropriate feeding-place, warn them of danger, and protect them. With partridges the whole family remains through the winter together, and only in the spring do the parents separate from their children. Whoever has observed how that a pair of birds are always together, always call to one another, share each joy and sorrow, and during the hard frost press close to one another in their sleep, in order to keep themselves warm, and all this at a time when the passionate instincts are asleep so deep in the breast of the bird, will admit that such a marriage is no ordinary union, but one grounded upon the most earnest and true friendship.

J. P. J

WILLIAM N. BYERS, THE ROCKY MOUNTAIN PRINTER.

HERE we have a Rocky Mountain pioneer, not a wild native of those regions, but a civilized, cultivated, and refined Christian gentleman. The story of his interesting life—were it told even in simple, unvarnished English—would touch the heart of every reader. Mr. Byers stands about five feet eight, weighs not far from one hundred and fifty pounds, is of fair complexion, and in temperament the Mental predominates over the Vital and Motive. His brain is well developed, of symmetrical proportions, and the mind is active, intense, and definite. He is thoroughly alive “from top to toe,” and drives straight to the mark. He is strictly temperate, and is always in good working order.

Besides a fine practical intellect—perceptives and reflectives alike well developed—he has very large Benevolence,

and hence is charitable. He has high moral sentiments, and is thoroughly honest and reliable. He is full of push and perseverance, being in all respects a thoroughly executive spirit. Grass will not grow under his feet. What he finds to do he does with his might.

He is very affectionate, and is popular in the social circle. As a business man, he would be enterprising and careful. If he had been educated for the law, he would have excelled in that profession. He would shine in legislation or literature, and grace any place of honor or of trust. Here is a sketch of this young Western editor, for whom we predict a useful and successful career.

—o—
WILLIAM N. BYERS was born in Madison County, Ohio, February 22, 1831. His early paternal ancestors were originally Scotch,

who subsequently settled in Ireland, and were represented in the siege of Londonderry in 1688-9. His maternal ancestors were of German stock, from Brandenburg. His later progenitors were early settlers in Pennsylvania, and afterward among the first to emigrate to the valley of the Ohio. His father, being a farmer in moderate circumstances, William, at ten years of age, was first sent to the district school, where he attended about three months each winter for eight years. During the remainder of the year he had

world, men, and things mainly to that source. In 1850—when William was about nineteen years of age—his father sold the farm in Ohio and removed West, finally locating near Muscatine, Iowa, and he availed himself of an opportunity to spend several months in traveling in the Northwestern States, and especially along the frontier in Iowa, then about half way across the State.

In 1851 he was employed as *chainman* to accompany a party of Government surveyors to Western Iowa; but the second day in the



PORTRAIT OF WILLIAM N. BYERS.

charge of certain farm work which kept him closely occupied, and rendered his winter's schooling irregular. Two "quarters" at a village academy completed his school education. As a school-boy he was proficient in spelling, but made no unusual progress in other studies. In the last term of his school he took up surveying, and learned it readily. From boyhood, however, he was a great reader of newspapers and periodicals, and attributes his education and knowledge of the

field he was given a compass and placed in charge of a party of men, and continued in that capacity until the completion of the contract in the spring of 1852. He was at Council Bluffs the same spring, during the great rush to the Pacific coast, and determined himself to cross the Plains, which he accomplished successfully, reaching Oregon in the fall of the same year, after a journey of one hundred and forty-five days, during the whole of which he saw not one house and but

one person whom he had met before, and then only for an hour or so. There was great mortality on the Plains that year, almost entire loss of stock, and great destitution. He reached his destination an utter stranger, with but twenty-five cents, and a terribly ragged suit of clothes. He first engaged to chop rail timber; then to saw logs; next he was put in charge of a saw-mill, and then was employed in measuring and rafting lumber to vessels at the head of the tide water on the Columbia River. In a few weeks he was offered a situation on the Government Surveys, and again took charge of such work in Oregon and Washington for a year. The year completed, he goes to California, from thence to Central America, and *via* Havana and New York, home.

But he did not think of remaining at home. The new "march of empire," under the "Kansas Nebraska Bill," in 1854, found in young Byers a warm co-operator, who pitched his tent at Omaha when there was but one log cabin on the site. Here he engaged in surveying for town, company, and private parties. Late in the fall he returned to Eastern Iowa and married a Miss Summer—granddaughter of Gov. Lucas, the first Territorial Governor of Iowa. Going back to Omaha, he was in the next week elected to the first Nebraska Legislative Assembly. In 1855 he was appointed U. S. Deputy Surveyor, and ran the first township lines in Nebraska. In the next two years he surveyed nearly all those lines for 150 miles front on the Missouri River. Meantime he engaged in real estate operations, and made money rapidly. Besides his Government work, he was also county surveyor and member of the city council of Omaha. In the money crisis of 1857-8 he lost heavily, and his property, being almost entirely in real estate (mainly town lots), and unsalable, rapidly reached the "ground floor" again. In the midst of these losses, in the summer of 1858, while performing an official duty and an act of humanity, he received a terrible gun-shot wound, the weapon being a Springfield musket, double charged, first with goose-shot and then buck-shot. In a consultation of seven physicians, six pronounced the wound necessarily fatal; the seventh said there was one chance in a hundred for life. The result

proved the one chance good—attributable mainly to an elastic vitality and *determination*.

As his recovery progressed, supposing incapacity for active out-of-door work would last to the end of life, he began to cast about for something which he could do. At length, as result of a banter, he agreed to take a printing press to "Pike's Peak."

March 8th, 1859, he left Omaha with press and material, while still suffering and almost helpless from his wound. A snow-storm occurred every week on the road to the Platte valley, then entirely uninhabited, except by half a dozen traders, who were stationed at the best points as far up as O'Fallon's Bluffs. However, he pressed on, and in forty-two days reached Denver. Three days after, there was issued the first newspaper ever printed at the foot of the Rocky Mountains. There Mr. Byers has maintained his business ever since, and engaged more or less in farming, mining, and in railways and other enterprises of the country. Meantime, during the winter of 1858-9, he wrote and published "Hand and Guide Book to New Mines," but unfortunately lost his entire venture in this new line by the failure of the printing firm (in Chicago) which held the copyright.

In 1860 he lost his dwelling-house and contents by fire. In 1864 he lost his printing office and farm improvements, aggregating nearly \$30,000, by flood. Most of the time he has had one or more partners in the ownership and publication of the *Rocky Mountain News*, but now owns and controls it entirely alone.

Mr. Byers was appointed postmaster (the third) of Denver by Mr. Lincoln when he became President. He says that he did not ask for the position, and was surprised when notified by telegraph of the appointment. After about two years' experience in this new capacity, he resigned the position on account of the pressing nature of his other business. A man of indomitable will and persevering energy, Mr. Byers can scarcely be said to have known an idle moment. By no means a creature of circumstances, he has made opportunities and carved a future for himself, despite misfortunes and calamities. He is one of the most industrious and upright men the Far West has to show.

INTERCOMMUNICATION.

BY WILLIAM FISHBOUGH.

1. PEDESTRIAN; 2. CANOE—HORSE; 3. WHEELS
—SHIP—MAGNETIC NEEDLE.

A man is a social being, he can attain the full development of his individual manhood only as he is helped to it by others. On this fact is founded the necessity of intercourse between man and his fellows; and in proportion as mankind become elevated in the scale of progressive development, it is necessary that the means and forms of intercommunication should be multiplied and improved. In the primeval or savage state of humanity, travel between distant places, persons, and tribes was altogether pedestrian; and such products of the rude industry as were exchangeable were borne from place to place in burdens on the back. In the next stage of progress, advantage was taken of the observed difference between the specific gravity of wood and that of water, by which the former can float on the surface of the latter with an additional weight resting upon it. The floating log was formed into a canoe, and propelled by paddles across the lake and up and down the stream. In a more advanced development of this secondary or barbaric condition of society, the forces of animate as well as inanimate nature began to be tamed, and the horse was superadded to the canoe as a bearer alike of man and his burdens. In the third stage, mechanical contrivances were brought into requisition as instruments of transportation. Perforated sections of tree-trunks, with rude axletrees and couplings, became carriages, to be drawn by the horse and the ox, while thin sheets of bark, or of such textile fabrics as art could then produce, were erected over the prow of the canoe, then grown to be a craft of respectable size, and the winds were made to press it through the water, as a vehicle of commerce between distant tribes and nations. By still further degrees of development, the canoe grows to the majestic ship. The position of the stars, and the magnetic compass subsequently discovered, point out the highways of the ocean leading to distant climes and portions of the earth, and finally to a *new world*.

4. MAIL COACH.

The fourth stage of development was characterized not so much by a change in the vehicles of human intercourse, as by an important addition to their uses and objects. Up to this time the more artistic means of communication were

exclusively in the hands of kings and wealthy merchants, and used for purposes in which the masses of the people had no direct concern. We have now arrived at the era of public mails, whose object, under the regulations of law, is, at stated periods, to convey written messages between all persons distantly situated from each other who may mutually desire such intercourse; and ultimately to distribute, on equal terms to all, that most potent instrument of civilization and progress, the Newspaper. Certain postal facilities were organized and established in Germany a little before the middle of the sixteenth century, thence subsequently extending to France and England, and finally, in the year 1710, to the American Colonies. But the business of carrying letters, though under certain government regulations, was yet generally farmed out to interested individuals, and the operation of the system was but partial and local. To our own Government belongs the credit of the first establishment of a Mail System impartial and universal in its aims, such a system being provided for in the Constitution of the United States.

5. STEAM.

By means of the Mail System, distant localities are brought into more intimate relation and sympathy. The thoughts, discoveries, inventions, desires, theories, purposes, and achievements of each are communicable to multitudes and to all sections, as light permeating a previously opaque mass. Public mentality is thus awakened as from the slumbers of a previous comparative night. Inquiry and discussion are stimulated, and new forms of aspiration, intelligence and discovery appear, until the old lumbering stage-coach can no longer supply the demand for quick interchange. In the impatience for a more expeditious and convenient method of communication and travel, the powers of expanded vapor are evoked, and the steamboat begins to plow our water-courses; and finally the locomotive goes thundering through the valleys and over the plains at the rate of thirty miles an hour.

"Behold the power of mind over matter!" exclaims the spectator, as he sees the long train sweeping by with the noise and commotion of the whirlwind. Forty cars loaded with anthracite, borne along with the velocity of the swiftest steed, and all by a force ultimately traceable to a man's brain—the brain which

planned and directed the construction of the locomotive. What is it, then, that mind can not do? and what other triumphs may not lie immediately before us?

The era of Steam and the Locomotive—the fifth step in our classification of the degrees of progressive development—is characterized by impulses in the public heart and mind unknown before. Our river-courses are being rendered available for easy and expeditious communication for hundreds, and some of them for more than a thousand miles. A network of railways is gradually extending over the country; distant regions are opened up to settlement and improvement; natural resources are developed; wealth is increased; new cities are built; internal commerce and trade receive an impulse and attain an activity never before possible. Days previously consumed in the transmission of intelligence between distant places are now reduced to so many hours. The world stood in awe at the sublimity of the achievement. New theories, impulses, plans, aspirations, and ideas were projected into notice and became themes of public discussion, until the whole intelligent mass of mankind stood quivering with thought. Quicker, quicker beat the public pulse, and at length—oh, how tardy seemed the locomotive in bringing intelligence of the acts of government, the movements of politics, the missives of commerce, the transactions of the stock market, and the messages of loved friends in sorrow or in joy! Oh, for some subtle agent that can bear thought through the atmosphere with the rapidity of the sun-beam! and in response to the general clamor, Morse tames the lightning, previously captured by Franklin, and presents it to the world as a postillion and messenger boy.

6. ELECTRICITY.

Washington first interrogates Baltimore, and is answered in thirty seconds. Baltimore asks Philadelphia, "How are you, my sister, this fine morning?" A few ticks of the clock, and Philadelphia's response is received: "Up, clothed in my usual drab, and sitting down to breakfast." Philadelphia to New York flashes over the wires, "How is it with thee, oh, Gotham?" and a responsive flash bears Gotham's reply, "All right, save a few fires, a murder or two, a riot, and a few thousand fraudulent votes for the Tammany ticket at the election yesterday. Not much for Gotham." New York to Boston says, "How fares it with thee, my Yankee sister?" and in just two minutes and a half the little witching magnets have clicked out Boston's reply: "Hub turns

heavily to-day; send cargo axle grease to stop its creaking." Up go those mysterious rows of posts, surmounting wires, stretching hundreds and hundreds of miles—to Cincinnati—Chicago—St. Louis—Charleston—Savannah—New Orleans—to every considerable town, village, and hamlet—finally over the great plains and the Rocky Mountains to the Pacific shores. Under the deep caverns of the ocean a highway is found for the flashing thoughts of a dozen nations in intimate colloquy—time and distance annihilated—the hours and minutes of the longitudes melted into one indistinguishable now: centers everywhere, circumferences nowhere; and the world rejoices over the development and sublime achievements of the sixth medium and method of intercommunication.

Meanwhile, Fulton's unsightly scow, which realized the dream of navigating our rivers by steam power, has grown to a majestic ocean palace, bridging the Atlantic in ten days. The locomotive goes thundering over the vast Western plain, toiling up the slopes of the Sierras, and mingles its last shriek with the roar of the Pacific waves. In its farther development, still in restless progress, the Magnetic Telegraph is becoming a finely interlaced network of metallic nerves, extending over the whole civilized world, through which commerce, armies, and nations are moved, and the humblest individuals are daily supplied with the pabulum of thought and reflection brought in absolute freshness from every country and clime; and with the complete development of the system, the whole vast body of Humanity will have become one grand polycephalic MAN, with instant intercommunicability of emotions between all parts, whether of pain or of pleasure.

7. IS THERE ANOTHER AND STILL HIGHER MEDIUM?

We have here, then, as we have shown, six general media and methods of intercommunication, rising in progressive order, from gross to refined; each succeeding one constituting a higher unfolding of the necessary material and mental circulatory system of the great body of human society. Must the line of progress necessarily end here? May we not guess, at least, on *a priori* grounds, that a seventh method is possible and even probable, in order to centralize and unify the whole system, and bring us in reach of the octave—the point of a new beginning? By electricity, the most subtle agent known in nature, we commune almost instantly with friends who, in a material

sense, are far distant. Is it not conceivable that by means of a still higher agent—(suppose we call it “psychodynamism,” or “soul-power”—the proximate principle of life itself)—we may interrogate the regions of the unseen and supernal? The better, the purer, the more lofty, refined, and unselfish we become in our development, the more our hearts yearn for the knowledge of mysteries which no agent of the merely physical universe, however refined, can ever search out. We have seen our loved ones sinking before us in death. Untold millions of the brightest, the purest, and the loveliest have filled the circle of a brief sojourn on earth, and departed. Where, oh, where have they gone? Do they still live, or is the light of intellect and the glow of love extinguished in them for ever? We have interrogated the sepulcher, and its hollow recesses have reverberated only the echoes of our own voice. We have questioned the pulpit, and been referred to a Book, with the solemn monition that we “must not seek to be wise beyond what is written.” We have consulted that Book, and found its teachings precious indeed, even beyond all earthly values; yet after reading it in the light of interpretations which the pulpit has authoritatively fixed upon it, the question still returns unanswered to our yearning and almost bursting hearts, “Where, oh, where are our loved and lost? Are they still near us? Do they think of us, love us, pray for us, aid us in our good endeavors? or has the grave obliterated all ties, and engulfed them in everlasting oblivion?”

And these questions are not the offspring of a prurient and sinful curiosity. They come of themselves, welling up spontaneously from the deep fountains of the soul, and can not be stifled. In the progress of all things material, social, intellectual, moral, and spiritual, and the human intelligence which has sought out and now cognizes them, these questions have come to be in order as much as any other inquiries by which the path of progress has been opened. And by whomsoever, and in whatsoever manner, the agitation of these questions is opposed, it seems certain that they will continue to be pressed, and that, too, with increasing eagerness and pertinacity, until they are fully and satisfactorily answered.

Well, we have been told repeatedly, and by thousands of professedly actual witnesses, that the super-electric and proximately vital agent here supposed is a demonstrated fact, and that by its means telegraphic communication is opened with another world. They tell us that

through its channels messages are being constantly received from the souls that have gone before us into that unseen realm, and that the long-sought solution of the problem of their condition has thus been proximately obtained. As to the truthfulness or untruthfulness of these assertions it is not our purpose at present to enter into any discussion. We would ask our readers, however, to look upon the shelved and shrunken fogies still living who once pronounced against the possibility of the Steam-boat, Locomotive, and the Magnetic Telegraph, and be warned against taking such grounds on this question as may make them equally ridiculous in all future time.

Truly, however, we have here a sublime and interesting thought! The magnetic telegraph conquers time and space. A psychic telegraph, if such there could be, would conquer death and the grave! What man who feels for humanity and desires the dispersion of clouds of darkness which have enshrouded the minds of millions of the noblest of our race, will not stretch forth his hands to heaven and fervently ejaculate, “God grant that it may be so!”

But whether all this be fact or whether it be fiction, the spirit of universal telegraphy, so characteristic of this age, can not be fully carried out until there are wires of fraternal communication laid down between all the sectarian isles in this great sea of mundane humanity—from the Catholic to the Calvinist; from the Lutheran to the Universalist; from the Episcopalian to the Unitarian; from the Christian to the honest Jew, Mohammedan, Buddhist, Brahmanist, Taonist; and when the thousand affiliated branches of this tissue of conductors shall have been brought to converge in one common trunk, let that be lifted on high and pointed to heaven to send up the common dispatch and petition, “OUR FATHER—THY KINGDOM COME.”

FAMILIAR CONVERSATION.—Arthur Helps, the pleasant English writer, whose books owe their distinctively bright quality to the fact that he makes his characters converse (and quite naturally too), says:

“An exquisite thing is good conversation. It winds round and round the subject. It has such charming pauses and interruptions; it is not merely like real life; it is real life. I think, too, it is not only very beautiful but very useful. I believe that if a man were to look back upon some of the most important resolves that he has taken in the course of his life, he would find that they have been greatly influenced by

what he has heard in a chance way in good conversation. I often pity the lower animals for their want of talk. To be sure, there is the lowing of kine; there are the songs of birds, which Malverton, who hates their noise, always calls twittering; there is the grand roar of wild beasts in deep forests, and there are the queer whistlings, shriekings, hootings, and other unaccountable noises of the lower animals, which for my part I like to hear, because I am sure they convey some meaning, and are well understood by kindred creatures. I dare say that love, hatred, joyousness, and terror are well enough expressed by those sounds. But where

are the quips, the cranks, the bright jests, the pompous periods, the sly rejoinders, the hard conclusions of inexorable logic which belong to good human talk? * * * * All other forms of conversation are, comparatively speaking, elaborate works of art. When I read or listen to speeches, sermons, essays, novels, epics, sonnets—especially sonnets—I seem to be walking in the trim gardens of our ancestors; but when I listen to good talk, it is like surveying the natural landscape, which does not, at first sight, convey a distinct meaning and purpose; but gradually a result appears in some influence or other upon one's mind; and that result comes sweetly, softly, and undeniably."

GREAT FIRES OF ANCIENT AND MODERN TIMES.

THE great fire in Chicago has so much occupied the attention of all classes, not only in this country, but also in Europe,—in fact, wherever the influence of modern civilization extends, that it may not be uninteresting to the reader to consider the surpassing destruction wrought by this conflagration as compared with other great fires in modern history. The origin of this besom of flame brings to mind the Scriptural precept, "Behold how great a matter a little fire kindleth!" for, as is generally believed, it was started by the simple incident of the overthrow of a kerosene lamp in a small stable in the southern part of the western division of the city. In an instant the loose straw lying about was ignited and the whole stable soon burst into a blaze. This being surrounded by framed tenements, cooper and cabinet shops, the flames rapidly extended. A large fire had occurred on Saturday night, just previous, and the firemen, already worn out with their exertions in extinguishing it, arrived on the ground as soon as possible, but half a block was burning before they could get well to work. The fire crossing the blocks diagonally toward the northeast reached a planing-mill, and then commenced the work of widespread ruin. The wind changed into a gale from the southwest, and carried the flames from the burning mill to a great distance, starting fires in a dozen places at once; and so it went on until five square miles, the heart of Chicago, comprising the entire business sections and nearly one-half of the thickly populated portion of the city, had been wiped out. The number of buildings destroyed is upward of eighteen thousand, and these buildings constituted the most valuable in Chicago—the principal hotels, banks, rail-

road depots, warehouses, public-houses, and printing-offices, and many of the finest residences, covering a value of nearly two hundred millions of dollars. The map furnishes a view of the burned district. Immediately after the fire there were between seventy-five thousand and one hundred thousand homeless people scattered through the highways leading from the city, and in the suburban parks and on the open prairie; and even now about forty thousand destitute Chicagoans are sustained by the bounty of others.

This appalling calamity, while it has aroused the sympathy of civilization to an extent most surprising as well as gratifying, has also brought vividly to mind historical recollections of other great fires. In ancient times it was the custom, when two nations were at war with each other, to destroy as thoroughly as possible any city which succumbed to siege.

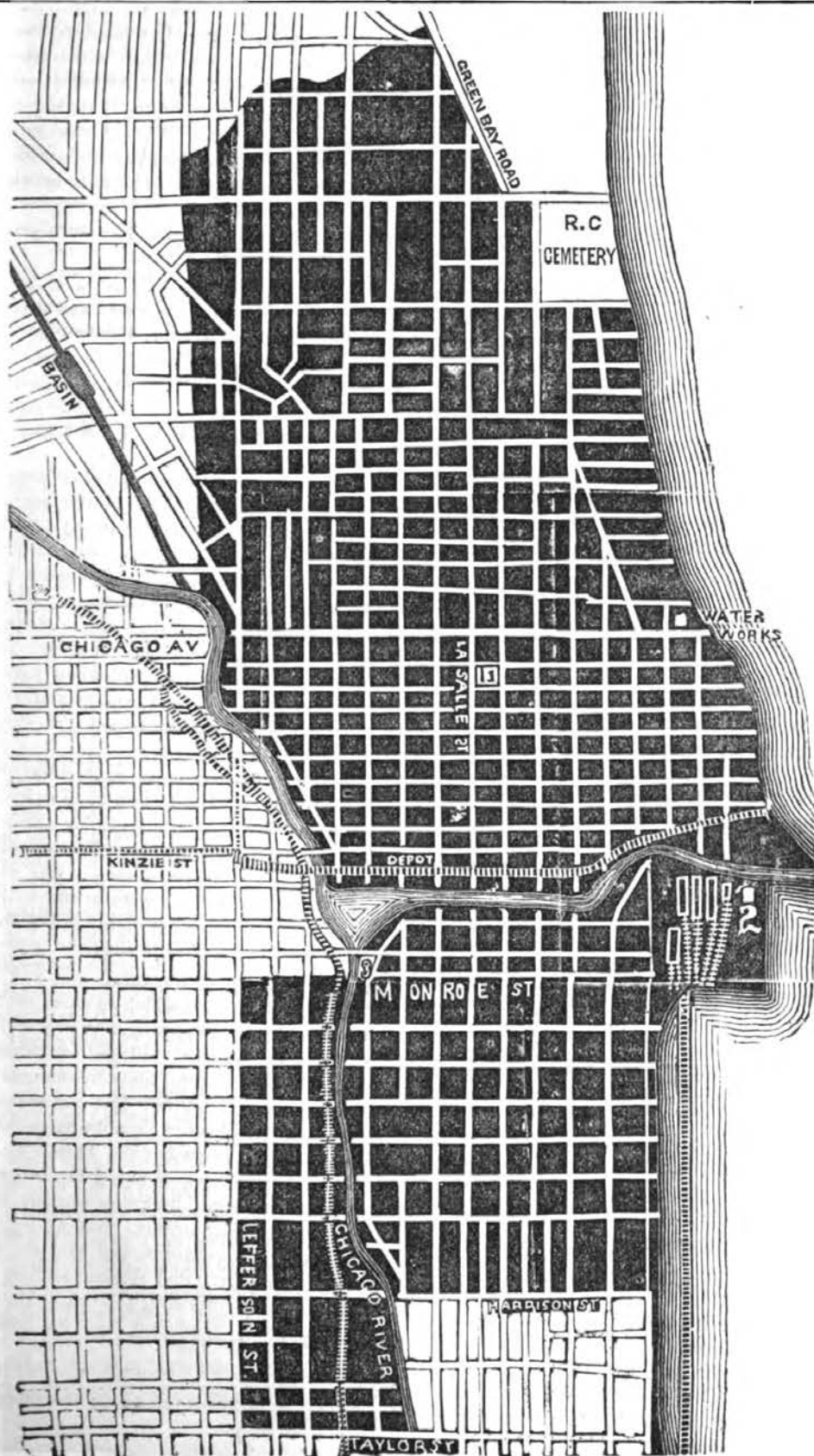
JERUSALEM.

Jerusalem, around which so much that is pathetic, noble, and impressive in Jewish history clusters, was stormed, pillaged, and almost totally destroyed several times by the ancient enemies of the Hebrews. The last great siege, which led to its utter demolition, occurred in 70 A.D., under Vespasian and Titus. The Jews long and desperately opposed the progress of the Roman arms, inflicting serious damage on the besieging armies; but at length the massive walls were breached, and the terrible vengeance of irritated Roman soldiers stayed not fire and sword until the beautiful city was a widespread desolation, and its inhabitants dispersed.

ROME.

The great fire in Rome, in the reign of the

MAP SHOWING THE BURNT DISTRICT OF CHICAGO.



brutal Nero, raged for eight days, totally destroyed three of the fourteen districts of the city, leaving only a few half-ruined houses in seven of the others. It is stated on the authority of Dion Cassius and Suetonius, that Nero was the chief agent in firing the city, although he subsequently sought to transfer the odium of having kindled it to the Christians, many of whom he caused to be put to death. It is also said that as he watched the progress of the flames from the top of a high tower, he amused himself with playing upon a flute.

LONDON.

The city of London had been visited by several fires of no small importance previous to the great one of 1666. It was on the 2d of September of that year that the great fire which occupies a special niche in its history began. The burning continued until about two-thirds of the city—including the Cathedral, the Royal Exchange, eighty-nine parish churches, including St. Paul's, and a vast number of other public buildings, upward of fifteen thousand in all—was reduced to heaps of ruins. The area destroyed was four hundred and thirty-two acres, comprising five-sixths of the whole city within the walls. The supply of water was deficient, the wind was very high, and the civic authorities were unequal to the emergency; the fire raged fiercely, and the flames spread rapidly on account of the densely packed character of the wooden structures of that time, and often breaking out in houses at some distance, until a vast extent was involved in the conflagration. By night the whole water side of the city was in flames. Evelyn's description from his own observations is a very interesting one, and furnishes a vivid account of the scenes in its progress. Two hundred thousand people of all ranks and degrees were rendered houseless by this visitation, and the sufferings from starvation were terrible, and very many persons lost their lives. This fire offers some parallel to that of Chicago, because it also was started on Sunday, and owed its destructive intensity to a high wind. The value of the property destroyed was estimated at seven million pounds sterling—about \$5,000,000 dollars in gold.

MOSCOW.

The destruction by fire of the greater part of Moscow, in September, 1812, by the Russians themselves, to prevent its being serviceable to the French as winter quarters, was a noble sacrifice to national feeling. It accomplished the desired object by defeating the

plans of Napoleon. Where he expected to find rest, provision, and shelter for his tired troops, he found a desolate and burning city. And he was obliged to retreat, the suffering and misfortunes of which almost completely destroyed a once victorious army, and broke the spell of terror which his name had hitherto inspired in Europe. The number of buildings consumed exceeded 3,800, and the loss entailed was at least \$125,000,000.

CONSTANTINOPLE.

This irregular and densely populated capital of the Turkish empire has several times experienced the fiery scourge. One of the most notable of these visitations took place in 1852, when in the course of a single night 3,500 houses were destroyed.

NEW YORK.

The great fire in New York of 1835 commenced on the night of the 15th of December, a very cold night,—so cold, indeed, that the water was congealed in the engines and the hose, and greatly impeded the efforts of the firemen. Five hundred and thirty buildings in the business portion of the city, and the most costly on the island, were consumed. The losses amounted to over \$15,000,000, and the burned district covered nearly one hundred and sixty acres. In 1845 New York was visited by another extensive conflagration, which burnt over much of the area destroyed by the calamity of 1835. Nearly three hundred buildings were this time leveled to the ground, most of them being mercantile houses, and involving a loss of \$6,000,000.

CHARLESTON AND PHILADELPHIA.

In Charleston, three years later, a fire took place which resulted in a loss of \$2,000,000; and in Philadelphia, four years after the New York disaster, a fire occurred which destroyed forty buildings, and also caused a total loss of about two millions.

PITTSBURG.

Pittsburg, Pa., was visited by a dreadful conflagration on the 10th of April, 1845. The fire originated in a frame house; the wind blew little less than a gale at the time, and, as the fire continued, frequently changed its direction, thus baffling the efforts of the firemen and citizens, who endeavored by blowing up buildings with gunpowder to check the progress of the flames. In this great fire no less than twenty-one blocks were burned, comprising over twelve hundred buildings, and the loss amounted in the aggregate to more than twelve million dollars.

ST. LOUIS.

The young city of St. Louis also has a great fire among the remarkable events of her interesting history, which in the extent of its devastation and the value of property destroyed, rivals the New York fire of 1845. This took place in July, 1849, reducing 418 buildings and twenty-five steamers to ashes. The losses were estimated at over \$6,000,000, besides the many lives which were lost.

SAN FRANCISCO.

In the recurrence of large and destructive conflagrations this remarkable city of the Pacific coast has been singularly unfortunate. The first fire worthy of note occurred on December 24, 1849, when the value of property destroyed was estimated at \$1,000,000. On the 4th of May, 1850, a fire of much greater extent occurred, involving a loss of \$3,000,000. On the 14th of the following month in the same year another conflagration broke out, the ravages of which were not stayed until nearly \$3,000,000 of property had been reduced to ashes. On the 2d of May, 1851, a still greater fire occurred, which burned over a wide district, the losses amounting to \$7,000,000. And

still another followed within a few weeks, viz., on June 22d, 1851, which destroyed \$2,000,000 worth of property. Thus within eighteen months six fires occurred, which destroyed in the aggregate \$16,000,000, and that, too, in a city whose population did not then exceed thirty thousand souls.

PORTLAND.

In 1866 the great Portland fire broke out, having been started by the explosion of a fire-cracker in a cooper's shop. The incidents of this catastrophe are still fresh in the mind of the reader. A violent gale swept the flames over a space of a mile and a half long by a quarter of a mile wide,—one-half the city, embracing sixteen hundred buildings, the business part, falling in ruins. The loss amounted to nearly \$10,000,000. Although but a few years have elapsed, nearly all traces of this infliction have now disappeared.

SACRAMENTO.

In Sacramento, the twin sister, in origin, with San Francisco, a fire took place in 1852 which destroyed in the very brief space of six hours two thousand buildings, causing a loss of \$12,000,000. A gale of wind was blowing at the time.

INFLUENCE OF FORESTS ON CLIMATE.

REVELATION informs us, without telling us precisely when or in how long time, that "God created this world." Revelation and science concur in forcing upon us the belief that by indefinitely long processes He fitted it to become the abode of the human race. Under the plastic hand of nature—by which I understand nothing more nor less than *God working*, always and everywhere in his own way—it became at length the abode of man. During the previous cycles of its being, inferior orders of life had been its inhabitants. Inferior orders were still to live upon it, and to enjoy its resources so far as consists with man's interest, but were not to rule. They were given to man, to be used for his benefit, and to be controlled by his superior intelligence, and consequently superior power.

Every species of being is so made and so governed by a Divine power as inevitably to "increase and multiply." Hence the increase of brute life, often so troublesome to man. Hence also the ever-increasing products of the lands and waters of the globe. Such in-

crease is in accordance with a law ever in force.

It is so also with vegetables. Lands produce as much without man's care and labor as with—perhaps more. Certainly an acre of forest produces a larger growth annually than a well-cultivated acre. Man's power is limited to a change of production, from what may be at present comparatively useless to what is always useful—from something now little needed to something which has become a necessity, as from trees, shrubs, and briars to the cereals—wheat, corn, etc.

Lands can not be spoiled. It is said of some cultivators that they spoil their land. In this there is some truth but more exaggeration. No fool can so abuse an acre but that a wise farmer can make it better than it had been ever before. He may damage soils for a time; may lower their annual value, but he can not long hinder their natural recuperation; nor, unless he should live longer than the patriarchs, can he prevent wiser men having the charge of them. If he attempt more than a mere temporary deterioration of the

soil, the great physical laws of the Creator oppose him, and will prevail. It is no more within human power to thwart the operation of those laws, which promise an increased productiveness of the earth proportioned to the increasing wants of mankind, than it is to nullify the Divine promise, that "seed time and harvest shall not cease while the earth remains."

If men could in any way diminish the productive power of the soil, or prevent its increase to the extent of supplying food and clothing to increasing populations for long periods to come, it would be by destroying the forests. This they could do for a time, by the combined force of axes and fires; but soon, within a generation or two at most, the forests would grow up again, in spite of them. The first effect of stripping a territory of its forests would be to diminish its agricultural capabilities; a secondary effect would be to lessen the numbers and enfeeble the energies of its population; a third consequence would be that, in spite of a reduced and degraded people, either forests or prairie grass and weeds would spring up, as the country might be suited to the one or the other; and the soil would, ere long, have regained all its former agricultural capability, in accordance with a great recuperative law, stamped by the Creator on all his works; but not till after great loss, suffering, and degradation had followed the wrong-doing.

In order to obtain the best results from agricultural labor, any country *must be* from one-quarter to one-half (averaging about one-third) in forest,—more in a dry climate, less in a climate naturally damp. In England, where the atmosphere is always moist and the sun dim with clouds or fog, one-quarter is enough. In New England, where the air is dry and the sun scorching, and where much of the land is worth more for growing timber than anything else, one-half is not too much.

Forests, to the extent above indicated, exert important influences on climate. Multitudinous facts pertaining to the Old World, together with fewer but not less important facts already gathered from the New, go to establish beyond a doubt the following truths. The facts we have neither the time nor the space to detail, but this may be done hereafter, if our conclusions are called in question.

Of two countries, similarly situated and equal in all respects, except that one is well wooded, forests being preserved on each farm adequate to a plentiful supply of fuel, building timber, and fencing material, for the farms and the adjacent villages, the forests and cultivated lands interspace each other rather uniformly; while the other has been deprived of nearly all its forests and has no new ones growing to replace them; the first has a very different prospect ahead from the second. The latter can not, for long years to come, maintain as dense a population; it will fail to grow as much farm, garden, and orchard produce; its farmers will be less thriving, less energetic, less successful; its people will be less intelligent, less refined, and less contented—will be moving off westward, or in some other direction. This is strong language, but the history of forest destruction and its effects proves it true. On this point, if not on all others, history repeats itself.

In a country once denuded of its forests, the temperature disobeys the laws which regulate it in a well-wooded country. The people are surprised with spring when it ought to be winter, and with winter when their seed waits to be put into the ground.

In a well-wooded country, storms are more frequent and less violent than in a woodless region. In one, the rains are so frequent, gentle, and refreshing, that the farmer, if he cultivate his land to a reasonable depth, has little occasion to dread the destruction of crops by drouth. In the other, excessive rains often follow killing drouths, producing freshets and thereby destroying much public and private property, in addition to losses just before suffered by a lack of rain.

The moral of all we have said may be indicated as follows:

If we would leave to posterity a green and fruitful country; if we would enjoy, and be willing that our children after us should enjoy, a climate characterized *generally* by rain-falls, frequent, gentle, refreshing, such as agriculture delights in, *seldom* dangerous, terrific, or devastating, and if we would have on our farms sufficient timber land to supply ourselves and our non-farming neighbors with fuel, lumber, and fencing material, let us preserve our forests to the extent above intimated; or, if we have already destroyed

them, let us begin to restore them at once. But if we prefer the brown and barren to the green and fruitful; if we desire fewer gentle rain-falls, and more freshets, interspacing long drouths, damaging to crops by their excess when they come, as well as destructive to property and perilous to life; if we think that timber, enough to meet all the wants of country and village life, will be a curse and not a blessing to posterity; if we really sigh for long, unbroken courses of wind to sweep over our dwellings and crops the year round; and if we sincerely believe that our winter grains will come out better in spring for having the snow blown from them, than if left where it fell for their protection, then down with the forests. "Woodsman, don't spare a single tree."

Apropos to this subject, but in another vein of equal practicality, the *American Manufacturer* comments on the Chicago fire, and the great destruction wrought in the terrible forest conflagrations. With reference to the latter particularly, it says:

"The amount of lumber destroyed at Chicago, which is estimated variously from \$10,000,000 to \$20,000,000, is but a drop in the bucket compared with the licking up of the millions of acres of rich timber lands. Take, for instance, the total destruction of the forests covering the peninsula between Lake Huron and Saginaw Bay. We are told that all that portion of the State lying east of the Bay and north of a point forty miles above Port Huron has been practically swept bare. The four thousand square miles lying between Green Bay on the east, and Fox and Wolf rivers on the west, have been denuded of their verdant covering, leaving nothing but blackened trunks, valueless, worse than worthless, since they simply cumber the ground. The fires which have raged throughout Michigan and Wisconsin were preceded by destructive conflagrations in Minnesota; and similar appalling disasters in Western Ontario, Canada.

"The 'big woods' of Minnesota, the vast and rich lumbering district of Saginaw, and the equally rich timber lands of Green Bay, Fox and Wolf rivers utterly destroyed; these are sufficient in themselves to show the nature of the loss the nation has incurred by

the great fires which have prevailed throughout the West. At present writing it is simply impossible to calculate the extent of the disaster. We only know that we have sustained a great national misfortune in the destruction of thousands of square miles of our best timber lands. The probable cost to the country may be inferred from the assertions made within the past year, to the effect that the timber lands of Michigan and Wisconsin would not furnish more than twenty years' supply to the country at the present rapid rate of consumption. These assertions were based upon carefully prepared statistics, reinforced by the evidence of the largest land and mill owners. The havoc made by ax and saw, marvelous though it was, has been rendered utterly insignificant in comparison with the fierce wrath of the forest flames, which have destroyed more timber in a month than all the mills in the West could sift through their saws in five years.

"It is not the inevitable appreciation of the cost of material for building ships and houses alone that we are thinking of (although that is a matter of the first importance), so much as the fact that our law-makers have witnessed the wholesale destruction of our primeval forests by approved modern appliances unmoved. The experience of the Old World seems lost upon them. Our people, who are quick to prompt their representatives, contemplate the havoc made in the growths of centuries with the utmost serenity. No organized effort has ever been made, that we are aware of, for the better protection of our forests. No effort has been made to regulate the cutting of, or to provide for the growth or culture of timber. The ax and saw annually denude millions of acres of the growth of centuries; fires rage throughout thousands of acres, consuming everything in their path, leaving black desolation in their track, yet the Government looks on as calmly as though it had no earthly interest in the total destruction of the best portion of its possessions. It is futile to attempt to stay the ravages of a conflagration which sweeps over thousands of miles of forest lands—man's efforts are hopeless here; but laws can be devised which will do much to reclaim the waste places, provisions can be made for regulating the cutting of lumber, and protecting and en-

couraging early growths. All this has been accomplished in other countries; it remains for the people of the United States, and especially such as are directly interested in the consumption of lumber, to say whether or not similar provisions shall be made in this country."

One way to mitigate the evil is to pass an act requiring every farmer to devote a certain *proportion* of his lands to the growing of trees. Let this be done in all the States. The rain-fall, as has been stated, will be regulated or graduated by the extent or by the absence of growing trees. If we would make the desert, prairies, denuded mountains, and hillsides "blossom as the rose," we must stock them with trees, vines, and shrubs. Let us encourage the growing of forest trees throughout the land.

HOME AGAIN.

REV. WILLIAM H. MILBURN, the "Blind Preacher," who some seven years ago passed over from the Methodist Episcopal to the Protestant Episcopal Church, has wearied of his new relations and returned to his earlier religious home. He writes us, "I have joined, as a local Elder, the church from which I started (Jacksonville, Ill.) in the ministry twenty-eight years ago." In a letter to the Bishop of Vermont, with whose diocese he had been canonically connected—dated September 23, 1871—a printed copy of which is before us—he resigns his connection with that body in terms of great respect and endearment, but finds the return necessary to his soul's comfort. After an earnest confession of his high esteem for those from whom he is parting, he adds: "But as one advances in years he finds it hard to form new attachments, and the heart turns with inexpressible longing to the friends and associations of earlier days. Nothing has obliterated, nothing can obliterate, my deep and yearning love of Methodism, the spiritual mother who, under God, bred and made me what I am." We felicitate our brother on his safe return to his early religious home, and pray that, though doomed to walk in outward darkness, spiritually at "evening time it shall be light."—*Christian Advocate*.

[All right. Let each church have its own; but we are a little curious to know what were the reasons for going out of the Methodist into the Episcopal; and wherein he finds one *better* than another. Is it merely the preference of prejudice? or is there a *reason* for it? We ask for information, and not from mere curiosity. We want to know *which* of the three hundred creeds among Christians embodies the

greatest number of excellences. We believe in changes from good to better. Which is the best?—ED. A. P. J.]

CONSOLATION.

BY MRS. FRANCES L. KEELER BARNES.

THOUGH hands grow cold that once were warm,
And hearts cease kindly beating;
Though lips that used to press our own
Forget their tender greeting;
Though souls that once burned bright with love
Burn dim without a reason,
And all of life seems sadly changed—
'Tis only for a season.

The things we can not understand,
While here we blindly wander,
Will lose their darkness when we pass
The pearly portal yonder;
And there all loves worth living for,
And all the hands worth clasping,
And all true hearts will still be ours,
Thank God, without the asking.
NEW YORK, November, 1871.

WISDOM.

HAPPINESS is a perfume that one can not shed over another without a few drops falling on one's self.

IN the long run, a tried and proved character for truth, honor, and honesty is the best capital, and gives the largest interest.

THE worst fraud that can be practiced in a free government is, cheating at elections. It nullifies the popular will, brings the suffrage into contempt, and makes good men shun public affairs.

"THE tree sucks kindlier nurture from a soil enriched
By its own fallen leaves; and man is made
In heart and spirit from deciduous hopes,
And things that seem to perish."

If men from their youth were weaned from that sauntering humor, wherein some, out of custom, let a good part of their lives run uselessly away, without either business or recreation, they would find time enough to acquire dexterity and skill in hundreds of things, of which idleness leaves them in ignorance.

SOME USEFUL RECIPES.

- For preserving the complexion—Temperance.
- For whitening the hands—Honesty.
- For sweetening the breath—Truth.
- To remove stains—Repentance.
- Easy-shaving soap—Ready Money.
- For improving the sight—Observation.
- A beautiful ring—The Family Circle.
- For improving the voice—Civility.
- The best companion to the toilet—A Wife.
- To keep away moths—Good Society.

SOCIAL opinion is like a sharp knife. There are foolish people who regard it with terror, and dare not touch or meddle with it. There are more foolish people who, in rashness or defiance, seize it by the blade, and get cut for their pains. And there are other wise people who grasp it discreetly and hold it by the handle, and use it to carve out their own purpose.

MEMORY presides over the past; action, over the present. The first lives in a temple hung with glorious trophies and lined with tombs, the other has no shrine but duty, and it walks the earth like a spirit.

MIRTH.

[Under this heading we propose to publish

which "A little nonsense now and then;"
"Is relished by the wisest men,"

and call on our readers for original contributions. We want only such jokes as have no sting in them, such as may be used to enliven and amuse, without malice or irreverence. Give us your best.]

WHAT is that which increases the effect by diminishing the cause?—A pair of snuffers.

D-E-B-T are the initial letters of "Dun everybody twice." C-R-E-D-I-T are the initial letters of "Call regularly every day—I'll trust."

A MAN with a long nose had the end of it frost-bitten. A friend remarked, "You should have rubbed it, and prevented the calamity." He replied that he did, as far as he could reach.

A FAT man riding upon a lean horse was asked how it came to pass that himself was fat, and his horse so lean. He answered, "Because I feed myself, but I leave the feeding of my horse to another."

SAYING MORE THAN HE MEANT.—Intending customer to druggist: "Do you keep dye-stuffs for sale here?" Facetious druggist, briskly and with emphasis, "We-ell, we don't keep *anything* else!"
N. W. B.

"Go it, old fellow," said two idle scapegraces to an honest laborer at work. "Work away while we play; sow and we'll reap." "Very likely, my lads," replied the old man, coolly; "I'm sowing hemp."

SCHOOLMISTRESS—Johnny, I'm ashamed of you! When I was at your age I could read as well as I can now.

Johnny—Ah, but you had a different teacher from what we've got!

STRICTLY LOGICAL.—The Chinese pay their physicians only while they are in perfect health. As soon as they fall sick, the pay of the doctor ceases. It is, therefore, the doctor's interest to cure his patients as quickly as possible.

SOME one, who it is evident does not highly appreciate the "national game," says: "No people under heaven can excel the Americans in the

manly art of sitting on a bench and seeing eighteen men play ball."

A GOOD story is told of a popular railroad conductor recently chosen deacon of a church in Middlesex County. A few Sundays after his new appointment it became his duty to assist in taking up a collection. He surprised the congregation by starting out with the characteristic ejaculation, "Tickets, gentlemen!" The contribution that day was unusually large.

A "POOR exile of Erin," hungry and cold, entered a barber-shop, ate, with the brush, a cup of lather, dug out the soap-ball at the bottom of the cup—ate that—and sat down to warm his feet! Then an astounded observer mustered his scattered wits and asked, "How did you like your lunch?" Says Pat, "The custhard was illegant; but, by me shoul, I b'lave the egg was a little too long in the wather."

THE LATEST INVENTION.—A smart Yankee in the oil regions has recently invented a fly destroyer that eclipses all others in fatal execution. It is made of molasses, diluted with water, with a slight tincture of gum-arabic and nitro-glycerine. The mixture is to be put where the flies chiefly congregate. After alighting in it and eating what they want, they generally succeed in extricating themselves from the sticky composition, and in ecstasies of delight over their escape, rub their legs together. The friction causes the nitro-glycerine to explode, and the unfortunate victim is *blown to atoms*.

MR. T., of S., Washington County, Maine, was lying very ill—so ill that it was feared he would be shortly summoned "to join the innumerable caravan that moves to the pale realms of shade." Without a quiet sick-room his recovery was hopeless. His physician had left the most peremptory orders that no visitors should be allowed to see him. One day a neighbor called, and requested of the nurse an interview with the sick man. The nurse replied that he should be most happy to grant the request, but that the doctor had denied all intercourse with his patient.

"But my business is very important," said the neighbor.

"The doctor has given instructions in the most positive manner that no visitors shall be permitted to see Mr. T. Therefore, as much as I should like to accommodate you, I feel obliged to decline."

"Do let me see him jest a minute!" again pleaded the neighbor.

"Really, I can't," was replied so decidedly that it precluded all further expostulation in the matter. "But if you will make known your business to me I will inform him at the very earliest moment consistent with his safety."

"Wal," said the neighbor, with something like a sigh, "I'm a gwine to set my bar traps next week, and Mr. T. knows a man in Boston that buys bar's lle. I want his address!"

Our Mentorial Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of its early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage.

BOXING.—What organs are necessary to be possessed in order that one may become a skillful boxer?

Ans. The desire to become a boxer is one of the prime essentials to the acquisition of skill in that direction, namely, a disposition to hit another and a desire not to be hit in return. If you watch a boxer, you will see that he has one arm and hand on guard in obedience to Cautiousness, and the other in obedience to Destructiveness and Combativeness, with a view to hit his antagonist. Boxing, like fencing, dancing, military drill, or skill in mechanism, may be learned. Boxing-teachers are not always quarrelsome, nor necessarily so; nor are teachers of dancing necessarily dissipated; though the pupils of the boxer may become fighting bullies, and the pupils of the dancer may use the art they learn as a source of dissipation.

We remember an anecdote which tells us of a light, graceful, genteel little man who was trespassed upon by a broad-shouldered ruffian nearly twice his size, and when he remonstrated, the ruffian drew off and was going to knock him down for daring to express dissent to his course of conduct, when the little man, quick as flash, struck the ruffian, and he fell like a stricken ox; but not being hurt he jumped up and drew off to strike the little stranger, and received another blow which felled him. He approached a third time, and received similar treatment, when, stepping back, he eyed his little antagonist with wonder and astonishment, and asked, "Who are you, anyhow?" "I am A. B., sir, at your service, the teacher of boxing, of whom you may perhaps have heard."

If respectable men all understood boxing so that they could defend themselves readily against the assaults of ruffians, who nearly all somehow learn boxing as their chief accomplishment, there would be less ruffianly conduct on the street and in the cars. If these bullies knew that every quiet gentleman he saw would be able, perhaps, to serve him as the boxing-teacher did his ruffianly antag-

onist, he would keep his hands off and behave himself with respect. We never recommend to people to carry pistols; ruffians do this. We do not advise men to learn boxing, but ruffians get a practical smattering of it; and the only reason why decent men should learn it is, that they may be able to defend themselves if assaulted. If we could abolish the whole system of boxing and pugilism we would do so.

The organs required for skillful boxing are large perceptive organs, large Weight, Combativeness, Destructiveness, Cautiousness, and Firmness.

UNUSUAL MARRIAGE.—A youthful reader of the JOURNAL makes some inquiries with reference to a marriage which was recently celebrated between a man and his mother-in-law. A marriage of this nature is very unusual for obvious reasons. Mothers-in-law are usually much older than their sons-in-law, and the average of men are not much disposed to marry women whose age exceeds theirs. In this case, however, there were certain circumstances, doubtless, which made the union agreeable to both parties; and as matrimony between such parties is not forbidden by laws human or divine, we can allege no substantial objection, not knowing more about the incident than its simple occurrence. In general, however, our opinion would be unfavorable to such an alliance, and that opinion would be based chiefly upon motives of delicacy, although we can conceive of special inducements. The man may have found in his first wife so many attractive qualities that he deemed it best to look to his mother-in-law for his second wife, as being the one most likely to possess the same qualities. And with reference to the lady, she may have found in the man while her son-in-law all the qualities she could desire in a husband, and so availed herself of the opportunity to make the relation closer than that which previously existed. Great disparity in age between parties contemplating the marriage relation is a very important objection. Especially is seniority in age on the part of the lady an important objection.

CONSCIENCE IN CHILDREN.—Does a child have the faculty of Conscientiousness? and at what age do its manifestations appear?

Ans. Several of the old-school metaphysicians deny that conscience originates in a special mental power. Some think it the result of Approbativeness; some of Cautiousness or fear; others, that it results from the faculties which produce policy. Mr. Darwin maintains that it grows out of the social instincts. Phrenology recognizes

Conscientiousness as a special faculty, as much so as that of reasoning or remembering, of loving or fearing. Some faculties manifest themselves in children at an earlier period than do other faculties. Most of the emotions, except that of sexual love, are manifested in childhood earlier than some of their intellectual and moral powers. In some children we see manifestations of reasoning at three. Others show but little at thirteen; some never show much. Some children will evince marked indications of a sensitive conscience at a very early age. But generally Conscientiousness is not very strongly manifested, at least it can not be thoroughly depended upon until the age of puberty. This age may vary from eleven to eighteen years.

SIGNS IN THE EYES AND FINGERS.—

When I was a school-boy, I noticed that those scholars who had large, open, bright eyes were the ones who excelled in most branches of study; also that those with long, thin fingers were better penmen than anything else; and from later observations I have concluded that persons who are wide between the eyes possess more intellectual ability, as a general thing, than those who are narrow. Are my observations and conclusions correct?

Ans. The peculiarity which you first mention is what led Dr. Gall to make those investigations which developed the science of Phrenology. When he was a school-boy he discovered, to his own satisfaction, that those of his fellow-pupils who had large, full, protuberant eyes were the best scholars at recitation; that they acquired or memorized their lessons with the most facility. A large protuberant eye indicates special facility or fluency of language, and is co-related with superior ability to remember words and statements. Persons with long, thin, bony fingers are, as a class, skillful in manipulations; and usually with those who are distinguished for their elegant penmanship we find Form, Size, and Weight large, and some fullness of the side-head. Wideness between the eyes is one of the indications of well-developed perceptive ability. Well-marked perceptive faculties are essential to the ready acquirement of knowledge. Your observations, therefore, have not led you astray.

BRAIN—ITS COMPOSITION.—According to late theory the mind of man is considered to inhabit the outside surface of the brain, which seems to be of a different texture from the central portion. Now, is this outside stratum of brain always of an even thickness all over the head, or is it deeper in some portions than others, causing the quantity that may be in one portion more than another to mark the disposition and character of the person?

Ans. The *cineritious* or gray matter of the surface of the brain is thicker or more abundant in those who are more intelligent and more intense in character than in the brain of the dull and stupid. The medullary or white matter, which contains the fibers and connects the surface with the *medulla oblongata*, is regarded, as it were, in the

light of a battery. Both the medullary (white) and the cineritious (gray) matter seem to be requisite, in proper abundance and health, to act as the instrument of mind. It is not positively known what the specific function of each part of the brain-substance is; but this is certain, that in healthy subjects the larger the amount of both white and gray matter the brain contains the better.

The more intelligent men have deeper convolutions of brain than those who are stupid, and, as a consequence, there is relatively more of the cineritious or gray matter, as the folded surface of these convolutions are covered with that gray matter. If the anterior or intellectual region of the brain be most exercised, the convolutions in that part of the brain will be deeper than in the other and less exercised portion of the brain. In the same brain, however, there is, generally, a pretty uniform thickness in the layer of gray matter.

EYES AND EARS.—I, a young man, have a perfect left eye, but a near-sighted right one; a perfect right ear, but a defective left one. How do you account for this? Is it best to do anything for it?

Ans. The special senses have a double set of special organs, precisely as each mental faculty has a double organ, viz., one in each hemisphere of the brain—and both the special senses and the mental powers require, for their proper manifestation, a healthy condition of their organs, respectively. The organs are all double, so that if one, from accident or other cause, becomes defective, the other will do the work as well as one can. One eye can see, but two eyes can see better, and so, we presume, as to all the organs of sense and all the faculties of the mind. Why one eye or one ear, one arm or one leg, gives out and the other remains good; why one tooth decays and another does not, may not be explicable—yet the facts remain. Occasionally one is born blind or deaf, or in some way decrepit, and no one can give the reason, but no doubt a reason exists. We have seen several persons with one blue and one black eye—one inherited from each parent; flaxen hair and black beard; the father's nose and the mother's mouth and chin are often seen.

A spectacle for the near-sighted eye, to give it the same focus as the other, is the only suggestion we can make as a remedy.

SWEATING FEET.—I am troubled very much on account of my feet sweating, and my feet emit a very offensive smell, and though I may wash them daily with soap and water I am still annoyed. Physicians tell me it will not do to stop them from sweating. Is there no solution which I may wash them in once or twice a week that will remove the odor?

Ans. The cure of this annoying affection is always difficult, if not impossible. Much, however, may be done in mitigation of the annoyance. The feet should be bathed thoroughly both night and morning, using the well-known "carbolic soap,"

or a solution of carbolic acid—an ounce in a pint of water; use a tablespoonful of this solution to a quart of water, after the feet have been well washed in soap and water. Boots and close, high shoes should be abandoned, as the leather easily becomes saturated with the perspiration and retains the odor. Use low cut shoes and a clean pair of stockings every day, or have two pairs, that one may be dried and well aired while the other pair is in use. The bad odor of the feet is usually associated with constipation of the bowels, and a general unhealthy and torpid condition of the skin and liver. You should live in these respects as normally as possible, avoiding coffee, tobacco, and greasy food, and using little sugar, but an abundance of fruit.

CLOSED SKULL.—I have a healthy and well-developed child three months old, but the top of her head or skull, which is usually open till a year old, is now nearly closed, and in all probability will be entirely closed in a very few weeks. Now some old women (and it appears to be gospel among them) have been telling my wife that "when the skull closes over before a child is one year old it can not live." Please let me know in your Notices to Correspondents whether there is any reason in this or not.

Ans. We "guess" the skull will grow with the growth of the brain, and give room enough. No fear need be entertained. If the child be properly cared for, it will live notwithstanding the unfavorable predictions of sundry over-cautious lady prophets. The skull is made for the brain, and not the brain for the skull. The heads of some children close in six months, others not under two years. It depends partly on the tendency in the child to secrete bony matter, and partly on the greater or less rapidity of the growth of the brain. It should be remembered that even where the *fontanelle* is closed, the skull is not a hard box which can grow no more, but that the skull is composed of many pieces, and never or rarely becomes entirely solidified at the seams. After the opening is closed in childhood, the skull still grows to the age of thirty or forty years.

WALKING.—Having read the interesting article on walking, in the September number, I desire to ask a question, viz.: Should the heel be the first to strike the ground, or the toes? If the former—as I think the case—why is it that when feeling fresh and well I invariably find myself first treading on the toes, and then falling back on the heel as I progress? When sick or fatigued, I find myself involuntarily walking with the heel first touching the ground. I think my gait is lighter and more even when I tread first on the toes, but don't know why it should be so. I wear, on my shoes, no—or else half-inch—heels.

Ans. A person may, when animated, walk touching the toes first to the ground; but we would not fear to wager a thousand pairs of shoes that a thousand children of five or of ten years of age walking deliberately, every one would put the heel to the ground first. If setting forth to play, many might run on tip-toe at first, as a spirited horse

steps in a high and springy manner at the start; but a mile of travel of horse or child will bring both down to the normal step.

It has been found that in constructing artificial limbs it is best to make the ankle entirely stiff. In walking with natural limbs, the ankle is kept stiff until the foot has rolled pretty well forward on the toes, and then, to lengthen the step, the foot is straightened by a motion of the ankle-joint, thus lengthening the limb by bearing the weight on the toes. We have known a few people who placed the heel down and then slapped the ball of the foot on the ground by a quick extension of the ankle-joint; but the walk was so singular that everybody stared at it. The ankle is naturally kept entirely stiff until the heel is considerably raised, when the walker extends the foot and thus increases the length of the step. But this does not occur except in fast walking. A sauntering walk, with short steps, does not require the rising on the toes, or much opening or motion of the joint.

TACHYGRAPHY.—Can you give any information as to the merits of Tachygraphy as compared with other systems of shorthand writing—or as to any persons who use it, or the papers who employ such reporters?

Ans. All we have been able to learn respecting Tachygraphy assures us that regular phonography is better. We do not know that any paper employs reporters who use tachygraphy, nor do we know any one who now writes it. We once expressed a similar sentiment, and were taken to task by the inventor of the system, and we offered to give desk-room to any one who wrote his system for a week or two, that his method might be tested and compared with phonography, and we would gladly publish the result. He did not give us the chance thus to test it.

TREMBLING AND CHILLS.—Why do men and animals tremble when they become chilled?

Ans. Strong impressions on the general system frequently manifest themselves through the spinal cord by the *reflex action* which we call "shivering." This is well seen in the effect of malarial poison in intermittent fever, in fear, in anxiety, or excitement from any cause; in the powerful effect of a general chill on the surface nerves, and notably in the advent of all the contagious diseases; for example, small-pox, typhus, scarlatina, which begin by a well-marked chill. The formation of pus in inflammations is another well-known instance. —

ELECTRICITY.—Does electricity have any more effect on the human body in sleep with the length to the north and south than it does with it to the east and west?

Ans. Many people think it better to sleep with the head to the north, so that the brain will become charged with electricity or magnetism. A bar of iron, placed north and south, will in a short time become polarized like the magnetic

needle. Perhaps a thinker, therefore, should sleep with his head to the north, and a dancer with his feet to the north, so that the part most used shall be properly magnetized. —

GREEN EYES.—Why do the eyes of carnivorous animals turn green when they become angry or frightened?

Ans. The pupils dilate under such circumstances, and the greenish glare from the choroid is seen through the thin retina. The same thing occurs at night, or in the dark, when the pupils dilate on account of the feeble light.

WHAT ARE HIS FAULTS?—Will Phrenology show what peculiar temptations one is most liable to? and how to overcome them?

Ans. Yes, when correctly applied by an honest phrenologist. We know of no other means by which it can so surely be determined.

SWOLLEN EYES.—What is the cause? and what will cure my eyes? they are swollen under the lower eyebrows, sometimes not so much as at other times. Age seventeen. I work part of the day and part of the night, and sleep part of the day and part of the night.

Ans. It is your night work which lies at the root of your trouble. You should stop that until your eyes are fully recovered.

PUZZLE.—Logan's and J. F.'s solutions of the age puzzle, in the November number, are correct. Very few of our readers have sent in answers to the quizzical problem.

What They Say.

GOOD SCHOOL TEACHERS.—The *Monthly Visitor*, of Norfolk, Va., discourses on "Our Public Schools" and on teachers as follows:

"The public or free-school system in the Southern States, especially in Virginia and North Carolina, has within the past eighteen months received such an impetus and such legislative assistance as to justify the highest hopes of its warmest friends; but without the co-operation of those who should be interested, little can be expected.

"First, we need *good teachers*, since good teaching can emanate from no others. It is an axiom in pedagogic circles, that as the *teacher*, so the *school*; hence we call upon our superintendents to test well the qualifications of all applicants; to discard personal influence and caste considerations, and let *merit* be the passport. No matter if Mrs. A. is a widow with six helpless children; Mr. B. a pillar in the church; Mr. C. an intimate friend of the superintendent and every trustee in the county; Miss D. the only support of her father's family, who, by-the-by, was one of the most popular men in the district; has the applicant *merit* above other competitors, is the decisive question? For the sake of the cause, let not sympathy and personal feelings usurp the place of *duty*. Let our superintendents appoint none who will not be a credit to

this honorable and highly important profession. The teacher should be the exemplar, the model for the immortal architecture; hence we urge the vital importance of *good teachers*. Make the school systems of the Southern States their greatest ornament, their most enduring and ennobling monument—the first essential of which is *good teachers*."

[Correct. We must know who is and who is not capable, and then choose the right person for the right place.]

REFLECTIONS.—[Our correspondent, J. C. Smith, of Dundee, Scotland, sends us the following New Year's Thoughts, which are appropriate at all seasons.]

Last year's trials, where are they?
Have they wrought us good to-day?
Are we better for that cross?
Was't our gain, that heavy loss?
Why is life not one long May?
Why should trouble come each day?
Why not have complete success,
Bringing hourly happiness?
What fruits brought you forth last year?
Seeds then sown will soon appear.
Cast you in both bad and good?
None can change them, if he would.
Let us sow no tares again,
Only wheat of purest grain.
Spring shall send her genial showers,
Pleasant harvests shall be ours.
Christian, banish idle fears,
Providence the vessel steers,
Safely o'er the sea He'll guide,
Landing safe on Canaan's side.
Cheerful may the voyage be,
Winds and waves are speeding thee.
Far away, our home's in view,
Resting-place for good and true.

OUR INDIAN AGENTS.—A Nevada correspondent, who has been some time a resident on the Indian Reservation, near Pyramid Lake, and is familiar with Indian affairs, writes us in terms which are by no means complimentary to the officers appointed by the Government to treat with the Indians. According to his account, Indian agents are inclined to practices of a very dishonorable character, not only toward the Indians, but toward those of their own color who may be so unfortunate as to have some close relation to them. One agent, whom he mentions by name, and who is generally known as a minister of the Gospel, has been conducting himself in a way not only prejudicial to the rights of the Government which appointed him, but tending to cast a stigma upon the calling he disgraces. Our correspondent further states that it seems to be well-nigh impossible to secure the appointment of honest men to treat in that difficult department of frontier work, and that those who would be acceptable to the Indian and white residents of a Reservation, even though they have been warmly recommended, are ignored;

and strangers having but little knowledge of the country, and no experience whatever in Indian matters, but a large proportion of political ingenuity and personal greed, readily obtain the desired positions. Under such circumstances Indian outbreaks are readily accounted for. Civil service reform should be applied to the Indian Department at once.

WHO BELIEVES IN PHRENOLOGY?—

Among scholars, scientific men, and divines we can name scores who not only *believe* in it, but who apply, teach, preach, or practice according to its principles. In all European countries some of the leading minds base all their deductions on these principles. Hon. Horace Mann, Rev. Henry Ward Beecher, Prof. Silliman, Prof. S. G. Howe, Hon. Amos Deane, Hon. S. S. Randall, Dr. John Bell, Dr. McClintock, Prof. Chas. Caldwell, Judge E. P. Hurlbut, and many other noted men in America, have given Phrenology a first place in their esteem as the best exponent of the human mind, and have incorporated its doctrines, and even its nomenclature, into their teachings and writings. The science does not go begging for great names and rare talent to indorse it. Fifty years hence it will take the same rank in men's esteem that astronomy, geology, and other natural sciences now do, and few will be found who will be willingly ranked as opponents, and none who will utter a sneer.

BRAIN IN DIFFERENT ANIMALS.—

Prof. Wilder, at a meeting of the Ithaca Farmers' Club, showed the brain of a kitten a day or two old. It has quite an imperfect appearance as compared with the brain of an old cat. The reason, he said, was obvious: the kitten is born blind and helpless; it learns to move and act—hence it is born with but partially developed brain. There is the brain of a calf and of a steer—both are nearly alike, except as to size. The reason is obvious: the calf at once or soon is to use its limbs and all its faculties, and hence its brain is so perfect.

Dr. S. J. Parker, an esteemed correspondent, said: "I call attention of the Club to the four brains exhibited by Prof. Wilder. Those of the calf and steer are coarse in their convolutions, both in the cerebrum and cerebellum, while the cat has a finer convolution in her cerebrum, and a very fine convoluted cerebellum." He says the reason is also plain. The motions of the calf and cow are coarse and rough compared with the cat. The mind of a cat is limited in capacity, but keen and exact as far as it goes, hence the coarser cerebrum, while the motions of a cat are peculiarly graceful and brilliant, hence the fine texture of the cerebellum. If, then, the theory is true that the cerebrum is the organ of the body by which the mind acts, and the cerebellum is the organ of *muscular combinations*, then this exhibition of brains corresponds with our knowledge, and is a happy proof of our ascertained facts. Such are the uses of the exhibitions of these specimens.

THE "EDUCATED MAN," ETC.—One of our correspondents takes exception to the statement of O. J. Bliss, in the article published in November under the above caption, that "One would find in the streets of Manchester and Rochdale (England) tenement houses where hens roost in the garret and the pigs wallow in the cellar, while the family occupy the ground floor along with the vermin, from which they may be distinguished by difference of size." He says this is "an unmitigated falsehood, which can be proved by truthful and steady Americans who have been there, and by thousands from there, now readers of the JOURNAL." For ourselves, we are glad to know that the statement is unfounded, and we admit that Mr. Bliss should be rather soundly rated for having uttered so serious an allegation against the cleanliness and order of the English laboring classes. "Manchester," however, must admit that the article in the main is an excellent one, and the views on the relation subsisting between capital and labor possess the merit of soundness. Written in the flush of his indignation, "Manchester's" statements appear to be strongly infused with spleen. So far as we ourselves are concerned, we are willing to make all allowance for his deep sense of outraged justice, but at the same time will accord to Mr. Bliss what credit is due him for literary ability and political discernment.

Another correspondent (Margaret McElroy) writes in a very different spirit:

EDITOR PHRENOLOGICAL JOURNAL: I have just finished reading "The Educated Man in American Society." Such a son must be a "bliss" to his mother in more senses than one. Would that more men advocating such sentiments as that article contains, graduated from our colleges, and were promoted to our places of honor and trust. Caste is truly becoming a *curse* to America, and it bears more heavily upon women (if possible) than upon men. There is much to be hoped for from the present human suffrage agitation, the labor unions, and the temperance party, each of which is a plank in an educational platform that already looms up considerably "larger than a man's hand."

"Then let us pray, that come it may,
As come it *will*, for a' that,
That sense an' worth o'er a' the earth,
May beat the gree, an' a' that;
For a' that, an' a' that,
It's *comin'* yet, for a' that,
That man to man, the world o'er,
Shall *brothers* be, for a' that."

RESTLESSNESS.—A Pennsylvania correspondent, in a sprightly letter acknowledging benefits derived from the reading of the JOURNAL and works on phrenological subjects, makes the following remarks:

"What a refreshing study Phrenology is! For instance, when the sermon is unusually 'chippy,' it is quite a relief to turn to the bumps of our fel-

low-sinners and study out, as best we can, their peculiarities. We ought to listen to the sermon, of course; but human nature will crop out occasionally. You have said that it is the routine of my life that wearies me. I have often realized it, and as often turned to Holland's advice to Rosa Hoppin Jones for consolation: 'Ah, this routine which is so hateful to you! why, madam, routine is the road to heaven and God; routine is the pathway of the stars and seasons, the signal of the tides, the burden of all the generations. The clouds sing it to the meadow, the meadow to the brook, the brook to the river, the river to the sea, and the sea to the clouds again, in everlasting circles of beauty and ministry.' "

Literary Notices.

There is a kind of physiognomy in the titles of books no less than in the faces of men, by which a skillful observer will know as well what to expect from the one as the other.—BUTLER.

NOTICING BOOKS. This JOURNAL is not a heavy quarterly, devoted chiefly to an elaborate REVIEW of new books. It is a lively, scientific, popular monthly, and proposes to keep its readers informed as to the titles, sizes, and prices of all the more important NEW BOOKS, with names of authors and of publishers. Instead of *criticism* we give brief *descriptions*. Let others sit in judgment and "cut up" or flatter as they please; we shall, as a rule, only describe, and leave it for our readers to determine for themselves whether or not they care to purchase. An author would, of course, prefer that his bantling should be commended; and a publisher looks for favorable notices to increase sales. But we must look first to the interest of our readers, and see to it that they be correctly informed, and not imposed upon by false representations. Our book notices will therefore partake more of the nature of descriptions than of reviews or criticisms, which will, we think, be just to all parties—authors, publishers, and purchasers.

THE EARTH. A Descriptive History of the Phenomena and Life of the Globe. By Eli-see Reclus. Translated by the late B. B. Woodward, and edited by Henry Woodward. With 234 Maps and Illustrations, and 23 Page Maps printed in Colors. 8vo; cloth; pp. 567. Price, \$5. New York: Harper & Brothers.

A great work on a great subject. Here is real knowledge, real science—geology, astronomy, geography. The Land; the Circulation of Water; Subterranean Forces; Earthquakes; Volcanoes; Whirlpools; Glaciers, etc., are fully treated of. The illustrations are numerous, executed in the highest style of modern art. It is in all respects the most complete work on physical geography, and should find a place in every library. Though not intended as a gift-book, it is a capital thing to give to a student of nature.

THE INVASION OF FRANCE IN 1814. Comprising the Night March of the Russian Army past Phalsbourg. From the French of M.M. Erekmann—Chatrian, authors of "The Conscript," "Waterloo," and "The Blockade," with a Memoir of the Authors. 12mo; pp. 369; paper. Price, 50 cents. Charles Scribner & Co.

Joint authorship is not so unusual in France as in other countries. The work under notice is the product of two learned Frenchmen, who blend their talents and work together most efficiently. The story of the invasion is told in a graphic manner, and will prove instructive to the student of history.

MY WIFE AND I; or, Harry Henderson's History. By Harriet Beecher Stowe. One vol., 12mo; 474 pp. Illustrated by H. L. Stephens. Price, \$1.75. New York: J. B. Ford & Co.

This story has given the *Christian Union* entrance into many families. The paper was sought by many, not so much for its other excellent matter as for "My Wife and I." The author puts herself, her observations, reflections, experiences into her book. She discusses all the popular questions of the day touching the relations of husbands and wives, marriage, divorce, suffrage, legislation, and domestic concerns, including love, courtship, and all their consequences. The book will find its way to all hearts, in all countries, as her previous works have done.

MOUNTAIN ADVENTURES in Various Parts of the World. Selected from Narratives of Celebrated Travelers. With an Introduction, and additions by T. T. Headley. With Forty-one Illustrations. 12mo; pp. 356. Price, \$1.50. New York: Charles Scribner & Co.

This is one of the series composing The Popular Illustrated Library of Wonders. It is more interesting than a novel, and must prove very acceptable to lovers of travel and adventure. Boys will be delighted with it, and all who read it will be instructed.

RICHARD VANDERMARCK. A Novel. By Mrs. Sidney S. Harris, author of "Rutledge," "The Southerlands," "A Rosary for Lent," etc. 12mo; pp. 330. New York: Hurd & Houghton.

Mrs. Harris writes well. She tells a story in such a way that one experienced in life would say at once, "How true!" She holds the mirror up to nature, and we may all look in and see the life she depicts to be more truth than fiction. Her "Richard Vandermarck" adds to her reputation as a story writer.

HISTORY OF LOUIS PHILIPPE, King of the French. By John S. C. Abbott. With Illustrations. 12mo; pp. 402. Price, \$1.25. New York: Harper Brothers.

The king has been dead long enough to be almost forgotten by elderly people who met him here, while the younger portion must look to history to learn of the life he led and the character he developed. Suffice it, Mr. Abbott has told the story of this—once exile in America—king of the French in his usual felicitous style. Every American may read it with pleasure and profit.

THE PREY OF THE GODS. A Novel. By Florence Marryat—Mrs. Ross Church—author of "Her Lord and Master," "Love's Conflict." Octavo pamphlet; pp. 117. Price, 50 cents. New York: Harper Brothers.

Here is the conclusion of this love story. Readers may infer from this whether they care for the beginning of it:

"And then, as his eyes turn to rest fondly on the face of Gwendoline Gwynne, and his hand seeks her own again, he murmurs, in a voice which is heard by one ear only:

"Then draw me closer, closer to thee, dear;
Do what we will, my fate and thine are fixed,
My life and thine inevitably mixed;
We take our destiny and do not fear.

"Yes! all of self has sweetly died in me;
Thy noble heart is beating in my breast;
No one shall steal it now! There let it rest,
And know, dear love, that I am lost in thee."

EAST AND WEST POEMS. By Bret Harte. 12mo; pp. 171. Boston: James R. Osgood & Co.

There are some thirty or more of Bret Harte's poems in this collection; some new, others old and familiar, including "The Heathen Chinee" and "The Legend of —."

LIFE AND LETTERS OF CATHARINE M. SEDGWICK. Edited by Mary E. Dewey. With Frontispiece and two Steel Portraits. 12mo; pp. 446; cloth. Price, \$2. New York: Harper Brothers.

A delightful book, giving the life of a charming character. Here is the picture of a mental career, given in her own elegant and immortal letters, the reading of which will make men and women *better* in every respect. The work is plainly and handsomely published, worthy of its distinguished subject.

"THY WILL BE DONE." Sacred Song and Chorus; Poetry by Louise Malcom Stenton; Music by J. Schwender. Charles Bunce, Brooklyn, publisher.

Mrs. Stenton has written a good deal of poetry, and has shown no little originality of style as well as true poetic capacity. "Thy Will be Done" is set very neatly and pleasantly to music, and will be appreciated, doubtless, by all who have an opportunity to sing it.

HERCULES WALTZES, Arranged by J. Jay Watson for the Piano, Violin, and Orchestra. Published by J. L. Peters, New York.

These waltzes, which are dedicated to the Hercules Life Assurance Society of the United States, have the merit of simplicity—a very important quality so far as the general sale is concerned, and what composer does not wish to sell his works extensively? The pieces are not only simple, but attractive.

THE SOUTHERN FARMER, an agricultural monthly journal for the South and West, is edited and published, at \$2 a year, by Dr. M. W. Phillips, Memphis, Tennessee. Among the contributors we notice the names of Prof. E. W. Hilgard of the University of Miss., D. L. Adair, of

Ky., James Stewart, and others. Let the *Southern Farmer* circulate throughout the Union.

HANNAH. A Novel. By the Author of "John Halifax, Gentleman," etc. 8vo; paper. Price, 50 cents. Harper Brothers.

This author has an assured audience, and she never disappoints.

THE NATIONAL TEMPERANCE ALMANAC FOR 1872—by J. N. Stearns; published by the National Temperance Society, No. 158 Reade Street, New York—is the best thing of its size and price. Save the price of one "drink" or one "smoke," and put it into this little pictorial almanac.

The same Society publish the following dialogues, by Mrs. Nellie H. Bradley, author of "The First Glass," "Young Teetotaler," "Reclaimed," "Marry no Man if he Drinks," etc.:

WINE AS A MEDICINE; or, Abbie's Experience. 10 cents.

THE STUMBLING-BLOCK; or, Why a Deacon Gave up his Wine. 10 cents.

The following dialogues are for lodges, divisions, and temperance societies:

THE FIRST GLASS; or, The Power of Woman's Influence.

THE YOUNG TEETOTALER; or, Saved at Last. 15 cents for both.

RECLAIMED; or, The Danger of Moderate Drinking. 10 cents.

MARRY NO MAN IF HE DRINKS; or, Laura's Plan, and how it Succeeded. 10 cents.

WHICH WILL YOU CHOOSE? 36 pp. By Miss Chellis. 15 cents.

TRIAL AND CONDEMNATION OF JUDAS WOMAKER. 15 cents.

Also a **MANUAL of the Anti-Tobacco Leagues**, for our young people. 10 cents.

THE CATHOLIC ANNUAL FOR 1872.—We are in receipt of this new Annual for 1872. It has evidently been edited with much care, and contains a varied amount of information. We find in it portraits of Pius IX., O'Connell, Eugénie de Guérin, Miss Procter, Archbishop Darboy, Archbishop Carroll, Commodore Barry, as well as many others. It also contains pictures of churches, cathedrals, scenery—in fact, it has over thirty-five illustrations. It is printed on the best of paper, and contains 144 pages, and all for twenty-five cents. New York: The Catholic Publication Society. In this Annual is also given a list, with prices, of many of the standard Roman Catholic publications, including Bibles, prayer-books, etc.; also a list of all the Roman Catholic schools, colleges, and seminaries in the United States. It is a handy book for reference.

MESSRS. POTT AND YOUNG, Church book publishers in Cooper Union, New York, are agents for a capital little English periodical entitled "The Chatterbox," which sells at 15 cents a number.

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

VOL. LIV.—No. 2.]

February, 1872.

[WHOLE No. 397.]



JAMES DENOON REYMERT.

THE organization of this gentleman shows a good degree of vitality, a tendency to preserve the balance be-

tween the brain and body. He does not exhaust his strength, but rather works with his surplus of vital energy, so that

in an emergency he has something to fall back upon, something in reserve. When by reason of excessive effort he has become worn out, comparatively little repose and a brief respite quickly restores him to wonted vigor. In fact, few possess his degree of recuperative power. His social nature is strongly marked. In the home circle, among friends, he finds great enjoyment; and it is one of his pleasantest occupations to provide for the happiness of those he loves. His intellect disposes him to investigation; he is not satisfied with mere statements; when they interest him, he aims to analyze and sift them. He takes nothing for granted, but requires proof, hence he is quite slow to believe. This characteristic affects his religious sentiments so far as to render him free from bigotry or superstition; he does not trouble himself to investigate mysteries, or that which is beyond his reach. He has much respect for sacred things, but is not governed by conventional usages in his religious observances; he will not pin his faith to any man's sleeve.

He has a strong practical insight into business affairs; understands the use of money, and can advise well with reference to its investment, but his large Benevolence inclines him to be free in the bestowal of charity and kindnesses. It is difficult for him to refuse to grant a favor; no one who enlists his sympathies is turned away without aid of some sort, be it advice, or something substantial.

As a worker, he is earnest and thorough-going; he has that sort of determination which brings matters to a climax. He is not to be put down or snuffed out without a severe struggle. He is very independent; accepts approval, but does not turn out of his course to secure applause or to avoid blame. He is little inclined to consult others with respect to business affairs, but blocks out his course for himself. In

decision he is quick, and aims to be as prompt in putting his designs into execution.

He is the man for some public position wherein he would be subject to many calls, for he is quick and positive in answering questions, and very rarely finds it necessary to review an opinion.

He has a very warm imagination, and so is easily awakened to an appreciation of the poetic and ideal. In the use of language he is free, and having had opportunities for practice in speaking, he should be known for considerable oratorical ability.

JAMES DENOON REYMER, the eminent advocate, and the subject of this sketch, is probably the best known Scandinavian in America. He was born at Farsund, one of the most southerly ports of Norway, in 1821. He is the youngest of four children. His father held the office of Collector of the Port for upward of forty years. The family dates back to the Gothic invasion of Spain, whence the name originated; settled first in Holstein, and subsequently removed to Norway, which last event took place over 500 years ago. Of his ancestors, this remarkable fact is worth mentioning: father, son, grandson, and great-grandson were in succession the pastors of the same church at Sogne Parish during the period from 1636 to 1738, without intermission.

His mother, Jessie Sinclair Denoon, was a Scotch-lady of the Campbell clan, whose family grounds were a part of the present Argyle estate, near the Clyde, where the castle of Denoon yet stands. He had two uncles who participated in the American Revolution, one of whom fell in the naval service. Another uncle, on the mother's side, was an object of British dislike on account of his publications in favor of the independence of the colonies in America, and at length made good his utterances by emigrating to America during the war. He became afterward the pastor of, and for over fifty years preached in, the "Auld Stane Kirk" at Caledonia, N. Y. The name of Rev. Alexander Denoon is yet venerated by the Scotch of that place.

At the early age of fifteen Reymert left his father's house, and being intended for mercantile pursuits, completed a course of study at the Commercial College at Christiania, the capital city of Norway. He was the youngest

student at that term, and returned home with his diploma only to leave it again for Scotland. He entered the extensive commercial house of John Mitchell & Co., at Leith. Four years were spent there in active duties, partly in the office of Mitchell & Co., but more especially in the study of law and literature at Edinburgh, in the law-offices of Messrs. Murdock & Spencer. In Edinburgh he was under the guardianship of his uncle, Rev. James Young, a minister of the Presbyterian Church. One day he happened to read a glowing description of America and the great West, in a number of *Chambers' Journal*, which so captivated him that he at once "struck out" for the "land of the free and the home of the brave," and arrived in New York in September, 1842, when twenty-one years of age. He sailed in the "Lady of the Lake" from Glasgow. There were few cabin passengers, but about three hundred Scotch and Irish emigrants. This floating colony was tossed about on the Atlantic for seventy days—while poverty, sickness, and famine spread among the emigrants. The heartless captain kept the ship afloat without seeking a destination, solely for the purpose of disposing of his stores at exorbitant prices, and thus take the last dollar of all on board for food. Through his contribution to the suffering and famishing, our young friend came ashore at New York almost without a penny. No sooner was he on land, than one of those cormorants, whose false hospitality is always ready to "take in and do for" the trusting stranger, soon relieved him of all his baggage. After a ten days' search, one trunk was found open and riddled in a stable. Friendless and penniless he wandered about the city of New York, until he met one of those good old Scotch dames to whom he had "cast bread upon the waters," and who now returned his kindness by offering her only shelter, a room in a cellar and a bed upon the floor: it was the widow's mite, a tribute of her gratitude.

Directed to the Mercantile Library of New York, he there became acquainted with the librarian, a Scandinavian, who with much interest advised him to go to the West. To raise funds for the journey, he disposed of his best coat for a canal-boat ticket to Buffalo, and one dollar in cash. This price was paid by a Norwegian missionary from the West, who promised to follow and become his patron saint in Wisconsin. On the squadron of canal boats which in tow sailed up the glorious Hudson on their departure from New York, there was a promiscuous gathering of Dutch, Swiss,

Germans, and French. Mr. Reymert's knowledge of various foreign languages now served him to excellent purpose. He at once became the medium of communication for all classes. Ten days of lively talk in Dutch, French, German, Scandinavian, and English might have been tiresome to any one, but the ever-varying changes on the journey made the tour most interesting. With "his last cent" he landed in Buffalo, and at once proceeded to the steamer "Bunker Hill," then loading for Chicago. She was an old craft, frail and shaky—she needed hands, and quickly a passage was secured for "work." Born on a rock-bound coast, and familiar with the sea and navigation, he became valuable on the stormy voyage up the lakes, which lasted ten days, to Milwaukee. He had worked his passage partly as a sailor, partly as an engineer. There were no piers or landing-places at Milwaukee in those early days, but a small tug-boat called alongside out in the lake to take passengers ashore. Milwaukee was then a dismal-looking village, with about a thousand inhabitants, yet it was head-quarters for the great Northwestern Territory, containing a total population of 25,000 people, spread over what now constitutes Wisconsin, Minnesota, and Dakota. Here there was a world open for the emigrant.

It soon became the work and pride of young Reymert to take an active part in the organization of society, and in the development of the immense natural resources lying intact. Long exploring tours with the pack and rifle; marches in the wild woods and on the prairies, where apparently no human foot had ever trod; camping on the ground, swimming rivers, and living on hunters' fare, all required strength and courage. Traveling for weeks without seeing the face of civilized man brought with it hardships, yet to the young explorer they were only triumphs to be treasured as the pleasures of memory. Where now stand cities with their churches and palatial mansions, the wanderer had slept without a human being within the range of miles.

Then came the first chance to make money. The Reverend friend (?) did not come as promised; but a Yankee school was vacant, and our young adventurer undertook to teach in it. The first lesson was quickly taught. It was to enforce discipline by putting out the biggest boy, and then three more. Now came the money part. The salary was \$10 a month and "board around." At the end of the term he received his pay in "scrip." This was practi-

cally worthless, except for taxes. The Superintendent shaved it kindly, Wall Street fashion, 25 cents per dollar—bringing a net sum total of \$7.50 for three months' work. Not a great capital, but a great and unexpected lesson in Western municipal finance. Not being so versatile a Yankee schoolmaster as he who, when he "boarded round," cured coughs and phthisics too, with roots dug from the ground, he had to pay five dollars out of this sum for quinine and whisky to the Doctor. At this time whisky rings were not in vogue.

The first law proceeding he took part in was in 1843, when he undertook to serve a warrant on a person who had lived forty miles from the seat of justice. It took a week to go and come through the trackless forests. There were neither roads nor bridges, but every stream had to be forded.

The tide of emigration flowed rapidly—the West took on a new appearance. Mr. Reymert married and settled down upon a farm at Norway, Racine County, and commenced the publication of the *Nordlyset*, the first newspaper in the Norwegian language published in this country. He was elected to the Constitutional Convention of the State in 1848, and was a useful member of that body. He is known as author of the Article on Suffrage in the Wisconsin Constitution; and with him also originated the important clause in that instrument, that "No distinction shall ever be made by law between resident aliens and citizens in reference to the possession, enjoyment, or descent of property." The importance of this provision can best be appreciated by the thousands of foreign emigrants who found themselves thereby secured against *excheat to the State* in case of death. The common schools, the rights of married woman, the homestead exemption, the abolition of imprisonment for debt, the abolition of the usury laws and of capital punishment, were objects of his special attention. He was elected to the first State Legislature in 1849, when the statutes of the State were formed. He was elected a Justice, Superintendent of Schools, Supervisor, and returned again and again to the Assembly, and also to the Senate. He was the first Vice-Consul for Sweden and Norway for the Western States. He was appointed Receiver of the U. S. Land office, and U. S. Sub-Treasury and Disbursing Agent for the Northwestern States. He was District Attorney, State Elector, and he held a variety of other public functions. He was a particular friend of Stephen A. Douglas, and became the Democratic nominee for Congress

in his district, on the Douglas ticket, when that statesman competed for the Presidency.

The Congressional Convention was held at Prairie du Chien, and at this time his friend, the celebrated Mark M. Pomeroy, so well known to political fame as "Brick," published his paper at Lacrosse. Mr. Pomeroy, with his determined energy, wanted Reymert nominated. There was no railway, no steamer going down that time; nothing daunted, he purchased a birch bark; and with another friend of Reymert—the ex-Speaker of the House, Mr. Hall, "paddled" down the river 100 miles to the tune of

"Then row away, row o'er the waters so blue,—
Like a feather we float in our birch-bark canoe;"

and they made the nomination. With such energy was the campaign contested, that Pomeroy and Reymert stumped over a district of two hundred miles by one hundred, stretching from Illinois to Lake Superior, making no less than two or three speeches a day each, for six weeks, on no day journeying less than twenty miles on horseback or in a buggy. Every school-house on the way heard them proclaim the greatness of their chief—"the Little Giant."

There are several interesting incidents in the Western experience of Mr. Reymert which will not be out place here. In 1844, one early spring morning, when the ice came down with the torrent, and the Milwaukee River rushed along swelling over its borders, a little apple-boy with his basket attempted to cross a frail floating bridge, but he fell, and while trying to save his apples, slipped into the river, basket and all. The basket floated on the water, but the boy was gone. Quick as thought Reymert threw off coat and hat and plunged in where the boy had fallen. He at once perceived that the eddy had sent the boy back under one of the hollow floats on which the bridge rested. And here he found him. He dove below the bridge with him and brought him out alive. It was a chilly bath in April.

In 1851, an old Norwegian, while hunting in the woods in company with his son-in-law, shot the latter dead. The dead body was found in the following spring close to a fallen tree, after the snow had melted off. The man had sought Mr. Reymert before he was indicted for murder; he said it was an accident, which he had concealed for fear of the consequences, and that he had made up his mind not to speak about it. The Court assigned him counsel. Mr. Reymert was sent for to aid in his defense. His assertion was so literally followed, that the

man did not speak a word for over five months after his arrest. The trial took place, and was a long and painful one, resulting in conviction. The bereaved daughter had just become a mother. The jury brought in the terrible verdict; it was near midnight; the court-room was crowded, and the big-hearted judge almost shrunk from his task. The criminal was to be taken to a distant jail to be hung. The doomed man remained motionless and speechless. The jury permitted his children to take their last farewell—a scene most heart-rending. Mr. Reymert, profiting by the general emotion, immediately drew up a petition to the Governor for his unconditional pardon. Judge, jury, District Attorney, and all present signed it, then and there. The man was pardoned, and “recovered his speech.”

In 1852, while living on his farm, which embraced about three thousand five hundred acres, and was stocked with about two thousand sheep, twenty horses, and a hundred head of cattle, a little Western village was there “laid out,” with mills and workshops, hotel, printing-office, etc. While engaged in constructing roads and in making other improvements, employing more than a hundred workmen, a flock of emigrants sought his place, filling the log cabins on his farm. They brought the ship-fever and cholera. A pestilence raged; death took off victims every hour; all transient persons fled; Reymert was the only active organizer amid the panic; his wife being in confinement with his last-born son, there was no escape for him. He improvised a hospital; a man was found who had been a convict in Norway, and whose good behavior in prison had gained him his pardon; he applied for a position in the hospital, for the purpose, as he said, to do as much good in the world, if he could, as he had done evil. He was made chief steward. The contagion continued to spread. There was but one physician who had the courage to attend; but in a short time brave young Doctor Squires fell before the scourge; another doctor was too far off to do much good. Mr. Reymert quickly mounted his horse and rode to Milwaukee for medicine and help. He met there Doctor Lissner, just arrived from Norway. Mr. Reymert presented him with a horse, saddle, and saddle-bags of medicine, and off they rode on the double-quick to the scene of action. In three days this physician was in his grave. In two days more the convict steward died. In that week Mr. Reymert buried in coffins made at his mill, and in graves dug by his men, one hundred and ten persons. One ever-

memorable night, while his wife and child were fast asleep, the servant sick with an attack of cholera in the ante-room, and lying stupefied with laudanum, without Mrs. Reymert knowing that the girl was sick, he went to a neighbor's house near by, to look after the family, who had a visitation of cholera. The husband had fled; the old grandmother was sick, and unable from age to comprehend the dreadful situation. The two little children were fast asleep, and the mother was drawing near her end. He watched by her, and in half an hour she died. He ran to the mill,—no soul was there. He shouldered an empty coffin and carried it to the plank-road; put it in a spring-wagon and drew it by hand to the house; put the coffin on two chairs in the house; lifted the dead body into it; went for the trusty old gravedigger, and with his help and the grandmother's buried her daughter before morning—returning to his home without Mrs. Reymert discovering his absence.

In the winter of 1851, Ole Bull, the famous violinist, his early friend, came with a number of Milwaukeans to pay Mr. Reymert a visit. The array of carriages was considerable, and they all expected to be well received, but not so *warmly* as it happened; for his fine, large residence had just been burned, and from the yet smoking ruins a few things had been saved and were heaped in the middle of the floor of a little log shanty in the neighborhood. His friends assembled in the cabin and surrounded the pile. Ole Bull played his “Carnival of Venice,” and all gave three loud cheers for the “Stars and Stripes and for old Norway.” The meeting was a happy one, and merry as a Christmas fête, even amid the ruins.

Mr. Reymert's literary as well as political tastes induced him to establish several newspapers in the West, and many of the productions of his pen, in different languages, evince no small ability. His well-known poem—“the Famine in Sweden,” contributed much to swell the fund raised here for the relief of the sufferers. The “Battle of Hafurdsfjord,” describing in verse Balling's famous picture, is another of his compositions.

Mr. Reymert is emphatically one of our self-made men. He has many good and warm friends among all classes. He has paddled his own canoe, and never got a dollar without work. His professional connection and business with the Hon. Caleb Cushing and other Eastern eminent jurists brought him often to New York, and in 1861 he removed to this city to engage in the practice of his

profession. His career here has been marked from the beginning by eminent success. He has been engaged in a great number of very interesting cases, among which the "Petersen Abandonment Case" occurred at once to us. A woman came from Canada with her two children and her sister. She claimed to be the wife of a Norwegian tailor, residing in New York, whose name was Petersen. She swore that she had married this Petersen eight years before; that the two children were his; that he had deserted her, and she had ever since sought him, and had now found him here living with another wife. The sister swore likewise that he was the husband of the Canadian woman and father of her children; that she herself had boarded him and his wife at her own house in Canada for nearly one year. A Roman Catholic priest, brought forward as a witness, swore that he identified Petersen fully as the person whom he had married to the Canadian woman at the time and place averred by her. The marriage certificate was produced. The three witnesses mentioned fully described and identified the man who stood before them; and the children bore such marked resemblance to him, that strangers were astonished. Peterson was arrested and tried for abandonment, and charged with bigamy. He denied that he was the man whom the plaintiff had married; that he did not know the woman at all; that he was living in New York or in Chicago at the time she said he was in Canada; that he had been married in New York; that his first wife had five children; they were all dead; and that he thereafter had married his present wife here, and lived with her ever since; that he had never been in Canada. Over thirty witnesses were examined, some being brought from distant States. The midwife, who had known him for many years, testified, and his traveling companions from Switzerland on his first arrival here were brought to the stand. The most minute circumstances in his life, during his entire manhood, were proved. The mistaken identity was established, and the man acquitted. The poor wandering woman from Canada was obliged to return without a Petersen to console her heavy disappointment.

Having organized the Hercules Mutual Life Assurance Society of the U. S. as counsel, he afterward took the presidency of that Society at the solicitations of clients who had invested therein. Having firmly established that Society, and with the entire approval of all concerned, he has now retired from that position,

and is again engaged in a large and lucrative legal practice. The writer has frequently sat in the law office of the subject of this sketch, and observed with close interest Mr. Reymert's powers as a linguist, turning in conversation upon law proceedings from one language to another, speaking in four or five different tongues to as many different clients with as much ease apparently as if they all were only the different phraseology of one tongue. The following poem is from his pen, and indicates his style:

NATIONAL ANTHEM.

God, who shields our noble land,
Spread o'er summit, vale, and strand,
Holy hope, and peace for all,
Hear this prayer, inspire the soul!
Be our Faith as pure and true
As the heaven's spotless blue,
And let Charity abound
Everywhere—the world around.
Keep us peaceful, glad, and free,
Glorious in liberty!
Home of Freedom, ever grand,
God protect our happy land!
And as Science shall ascend,
Human errors to amend,
And as Knowledge lifts the veil
Human follies to curtail,
And as Thought in full array
Shall give action proper sway,
And as liberty of speech
Shall us Virtue's beauties teach,
Gracious God! let all rejoice,
Praise Thee, with a nation's voice!
Let us not by feeble hands
Bind to us all other lands;
But let soul to soul be bound
Uncontrolled by charts or sound;
O'er the earth, where man doth dwell,
Let our hearts in friendship swell.
Keep us peaceful, glad, and free,
Glorious in liberty;
Home of Freedom! our own land,
God preserve thee ever grand!

MEETING DEATH. — Bonaparte died in his military garb, his field-marshal's uniform and boots, which he had ordered to be put on a short time before his dissolution.—Large Approbativeness; Ambition. Augustus Cæsar chose to die in a standing position, and was careful in arranging his person and dress for the occasion.—Large Self-Esteem and Firmness, with Approbativeness. Siward, Earl of Northumberland, when at the point of death, quitted his bed, put on his armor, saying "that it became not a man to die like a beast."—More pride, ambition, and love of praise. A more remarkable instance is that of Maria Theresa, of Austria, who, a short time before she breathed her last, having fallen into a slight

slumber, one of the ladies in attendance remarked that her Majesty seemed to be asleep." "No," said she, "I could sleep if I would indulge in repose, but I am sensible of the near approach of Death, and I will not allow myself to be surprised by him in my sleep. I wish to meet my dissolution awake."—Large Cautiousness and Secretiveness. She wished to realize it all.

THE company of a good-humored man is a perpetual feast. He is welcome everywhere. Eyes glisten at his approach, and difficulties vanish in his cheering presence. Franklin's indomitable good-humor did as much for his country in the old Congress as Adams' fire or Jefferson's wisdom. He clothed wisdom with smiles and softened contentious minds into acquiescence.

HOW THE DIFFERENT FACULTIES COMBINE.—No. 1.

THAT man is "fearfully and wonderfully made" is a thousand times more clearly evinced by the study of the mind than by the study of the physical structure; and no language of criticism and exposition can exceed the facts in relation to the bodily organism. Still the mind, in its complexity and variety of action, rises as much above the beauty and harmony of the bodily functions as mind itself is superior to matter. We contemplate the eye, and study the laws by which sight brings us into contact, as it were, with distant objects, revealing their beauty and minutiae. We study the ear, and admire the law by which sound in all its variety, from harsh thunder to softest music, is brought to the comprehension of the mind. Or we contemplate the muscular and nervous system, digestion, assimilation, and the power of simple and complex muscular motion, and we are lost in wonder and admiration. If one will watch the performance of Ole Bull in some of his masterpieces of musical execution, or the astonishing feats of balancers or sleight-of-hand performers, or dancers, it will roll upon him the conviction that man's body is wonderfully constructed, and may be trained to actions of infinite grace and precision. Yet all these bodily powers are subject to the mind, are controlled, guided, and inspired by it. If this delicate and complex mechanism of the body excites wonder, what shall we say of the harmony, complexity, and perfection of mental action? Though the mind has forty or more well-marked faculties, each of which has its own independent, individual action, as distinctly so indeed as the functions of sight, of hearing, tasting, smelling, or feeling—any one of which may be possessed in the absence of the others—yet

these separate mental faculties are capable of acting in combination, in groups, sometimes of two, sometimes of a dozen faculties; and it may be possible for every faculty to be aroused and act in conjunction in the carrying out of some great purpose.

In proportion as mind is cultured and refined, these complexities of mental action become more common. An uncultivated man lacks self-restraint. If he desires anything he seizes it with both hands, and shows his wishes and purposes undisguisedly; while a man of larger culture, whose faculties have been accustomed and trained to act in harmony, will wait for an appropriate opportunity, and probably solicit permission to have the object he seeks. Such a man takes into account all the conditions, remembers the rights and interests and authority of others.

Nowhere is good breeding, or the want of it, more manifested than at the *table*. Let a hundred hungry passengers, when a train of cars stops for dinner, rush to the tables all strangers to each other, with perhaps fifteen minutes for dinner. Those who are the best trained in the courtesies and amenities of life will show some regard to the rights and interests of those around them; those less cultured will help themselves like hungry schoolboys. Some persons have been so trained in self-restraint and in respect to the rights of others, that even on occasions of fire and shipwreck their polite regard for others and their relative self-abnegation is manifested even in these extremes. The engineer on board the burning steamer "City of New London," in Nov., 1871, having secured for himself a life-preserver, and finding a lady on deck without one, kindly took his off and gave it to the lady, by means of

which she was saved, while *he* was lost. His benevolence and the exercise of the elements of social gallantry and manly courage cost him his life, while they ministered to the saving of hers.

The less culture, then, one has, the more directly will his faculties act. If his Combativeness be insulted, he strikes back; if his Acquisitiveness is offended by the grabbing selfishness of another, he instantly grabs back. The woman before King Solomon who did not own the child was willing to have it divided, but the real, loving mother was willing to lose her child rather than have it divided and killed. Parental instinct awakened reason, benevolence, and conscience in her case, and she cried out in her mother's agony, "Oh, my lord, give her the living child, and in no wise slay it."—1 Kings iii. 26. On the other hand, if a person of harmonious development and an active condition of all his faculties be insulted or struck, he considers who the man is that struck him, what the occasion and circumstances are, whether he will compromise himself by striking back, its effect on his standing and reputation, and even upon his safety; for the bully generally gets the best of the gentleman if the latter condescends to use the bully's weapons or the bully's means of defense, and though the man may be burning with indignation, he will walk away, and perhaps even decline to prosecute the villain, lest he might have his house burned, or a bullet put through his head on some future occasion.

Acquisitiveness acting alone would appropriate anything of value at sight, just as the greedy goat, the pest of all decent people, appropriates anything and everything for food as he prowls through the neighborhood. But a man who has been trained to complex mental activities will feel the strong desire to acquire, but he will plan, contrive, establish industries; he will plow and sow in seed-time that he may in the future reap an abundant harvest. And the more developed and cultivated a community is, the more complex and extended will be the plans for the acquisition of property. And that which is true in relation to the acquisition of property or self-defense is true in regard to nearly every mental effort.

To be more specific, we remark, that if In-

dividuality be called into activity, it invites the co-operation of every other intellectual faculty. Individuality recognizes things in the abstract, comprehends their existence simply, takes cognizance of what *is*. The action of this faculty instantly awakens its neighbor, Form, which judges of outline, configuration, shape. But everything has bulk as well as form, and the organ of Size is located next to the organ of Form, and it at once is awakened to activity to judge of the magnitude of the thing in question. That being done, another quality is brought to view, viz., Weight. Things may be of the same form and size, but differ in weight, which is another element of matter, and that faculty is excited which judges of density, and also appreciates the element of gravitation as it relates to things, and aids in judging of the perpendicular. Things may be alike in form, size, and weight, but differ in color, and the faculty which judges of color is brought into action to give its judgment. The order in which things are arranged is another element which has to be estimated. The number of the parts or of the things seen is another. Then objects occupy local position, and the faculties of Order, Number, and Locality are called into action, to judge of these conditions. After the percepts have estimated the existence and qualities of things, the reasoning faculties are awakened to comprehend the relations and uses of things. Thus all the intellectual faculties are brought into requisition by the activity of Individuality, one thing seeming to depend upon another on the same principle that the nursery story is based, where "The ax began to hack the staff, and the staff to whip the kid, and the kid to go," etc.

Eventuality treasures up the knowledge which the perceptive faculties require, and this faculty acts in a reflex manner upon all the percepts. Ten years after experiences have been had, something will awaken their history as it is held by Eventuality, and all the percepts being acted upon by this memory, the battle is fought over again in all its details and particulars. All the sports and pastimes of youth, with every detail, will be re-enacted.

Sometimes the reasoning organs, Causality and Comparison, become awakened, and by

their action arouse the activity of all the percepts, which are called into requisition to furnish the facts which the reasoning faculties require for the purpose of forming a judgment.

Language is alike aroused to action by the excitement of the intellectual faculties, the selfish propensities, and the social or moral emotions; indeed, Language becomes the servant of every faculty and feeling.

If Alimentiveness becomes aroused by hunger, it awakens into co-ordinate action every surrounding faculty. The command, "Rise, Peter, slay and eat," was addressed to Combativeness and Destructiveness for the grati-

fication of Alimentiveness. When the dog is hungry he finds a track, and hounds his game till he captures it. Alimentiveness in a cat excites her Secretiveness and Destructiveness, and she silently watches and waits, or secretly prowls that she may pounce upon her prey. In the squirrel, Alimentiveness excites Acquisitiveness and Secretiveness, hence he gathers nuts or corn and hides them away for future use. In man, the elements of industry, Combativeness, Destructiveness, and Constructiveness are excited by Alimentiveness, and also Acquisitiveness and Secretiveness to gather in and store up the harvest; so that one faculty becomes an incitement to half a dozen.

PROTOPLASM; OR, THE MYSTERY OF PHYSICAL LIFE.

BY REV. WILLIAM PITTENGER.

EXISTENCE is made up of two great factors, which, although closely connected, present many marked contrasts. Of these two the animate world is always regarded as at once more important and more mysterious than the inanimate. The latter exhibits many wonderful phenomena, and the wisest investigator of its laws reaches a point beyond which we can not pass; while the processes that have been discovered are too complex to be followed into their details by less than infinite intelligence. Yet with all its wonders and mysteries, inorganic nature is only the platform upon which rises the far more diversified and majestic superstructure of life. In this realm new forces come into play compared with which, in the marvelous character of their working and the strangeness of their results, all others appear simple and plain. Life itself is the "open secret" of the universe. It clearly derives its powers from the unvital existences by which it is surrounded, yet does not belong to their number. It is separate and apart in its lowest as well as its highest forms. It takes of the materials resting on the earth, or afloat in air or sea, and transforms what is thus selected to new likenesses, subordinated to its own purposes. Oxygen, hydrogen, carbon, and nitrogen, which make up so large a part of the inorganic world, enter into the composition of plants and animals in yet greater proportions, and matter of various kinds passes from the unvital to the vital state and back again with apparent ease, and in ceaseless succession. So continuous, indeed, is this transfer, that some philosophers are disposed, against all the evidences of

the senses, to admit the inherent vitality of each particle of matter. They are, no doubt, largely influenced by their desire to reduce all knowledge of nature to terms of one kind, so that instead of speaking of an inanimate world and a world of life, they may be able to view all things as one system under the domain of purely physical laws. As it is obviously impossible to explain away life, so that it may be reduced to the level of dead matter, one alternative alone remains,—that is, to show that matter lives. The attempt at first view seems hopeless, but ingenuity may accomplish much. Can it be that rocks and soils are as truly alive as plants and animals? Such is the view held by no small number of scientific men at the present day. They regard the phenomena of life as resulting from the concentration of a universal vitality by means of organs. Life, they believe, exists in the particles even of a stone, but in such a balanced and diffused state as to give rise to no sensible motions, while in the organism it is concentrated into appropriate and visible channels. According to this theory, all the inorganic matter of which the world is made up, differs from the most active and powerful animals only as electricity diffused equally through a cloud differs from the flashing lightning which leaps into view when the electric equilibrium is disturbed. Organization, or the want of organization, explains the whole difference, and such philosophers are naturally fond of employing the terms "organic" and "inorganic" as discriminating between the living and the not-living worlds. The discoveries we mentioned in a preceding essay con-

cerning the nature of force and its presence in or around each ultimate particle of matter, have contributed to foster this belief. It is perfectly consistent with it, and, indeed, almost a necessary consequence, that matter may, under proper circumstances, assume a rudimentary life without either creation or generation; and that when such a beginning is made, there may be a continual progression toward higher forms. Some of the boldest and ablest thinkers of the present day do not shrink from declaring that this is the explanation of all the phenomena of the universe. But before weighing the degree of probability which belongs to such startling and revolutionary speculations, it will be well to examine, broadly and impartially, the phenomena of life, in order that we may obtain a clear view of the facts to be accounted for. In this preliminary survey no regard will be paid to scientific classification except where it throws into relief the kind of facts adapted to our purpose.

After having divided the whole world into animate and inanimate, we find that the former portion requires subdivision. Even upon the most careless scrutiny it resolves itself into two great classes—plants and animals. Long before the dawn of exact science the distinction between these was recognized. A horse and a tree are so unlike that we are in no danger of confounding them, or mistaking the class to which each belongs. A cricket, and the blade of grass upon which it perches, are distinguished with equal ease. Yet, like almost all other natural divisions, this has its disputed and wavering boundary line. Highly organized plants and animals are, indeed, strikingly unlike each other, but the degree of unlikeness lessens with the decreasing complexity of each class. From a common starting-point, there appears to be a continuous development of plants and animals in different directions, which, at every advance, widens the interval between them. Two travelers, starting from New York and journeying respectively northward and eastward, would be carried farther apart by each step taken. So, while highly organized individuals belonging to one of these classes are widely separated from all those similarly advanced in the other, there are some low forms of life which can scarcely be assigned with certainty to either. Some organisms have been called animals for a time, and afterward decided to be plants; and the reverse process has also taken place. The sponge is a familiar example of this uncertainty. Most persons unversed in biology would, on first inspection,

feel assured that it was a moss-like plant. Yet the authorities rank it as a true animal. Indeed, all the popular distinctions between the two classes, while holding true in the vast majority of instances, sometimes fail signally. We will mention a few of these distinctions, for the purpose, not only of exposing their fallacy, and pointing the always appropriate moral of the danger of deciding anything from a mere surface-examination, but because we can thus get before our readers, in a vivid form, some of the striking phenomena of life itself. We will then be better able to judge the various theories that have been offered concerning the nature and origin of vitality.

It is commonly asserted that animals are distinguished from plants by having the power of moving from place to place, while the latter are fixed in one spot; but the oyster and many other animals attach themselves to some stationary body early in life, and grow there for the remainder of their existence; while some of the lower plants, such as duckweed, never take root at all, but float at the will of the elements; and some others in the germ state seem to possess even the power of independent movement. Animals generally feed by means of mouths, and plants by roots; yet the cactus and many other plants appear to absorb their nourishment from the air through leaf and stalk; while many animals of the lower orders have no mouths at all. Animals usually exhibit some traces of consciousness and volition in their actions, while plants move only as impelled by outward influences. Even this distinction is not always trustworthy; the slow pulsating of a sponge, causing the water to flow in and out of its pores, exhibits no more will-power than the daily opening and closing of certain flowers, or the shrinking of the sensitive plant when touched; hardly so much as those plants which bend their shoots toward the stronger light, or enlarge any root which has penetrated to a rich supply of nourishment.

But although the above distinctions have so many exceptions that we can not consider any of them as resulting from natural law, or expressing a radical difference between the two contrasted kingdoms, we are not therefore warranted in concluding that the boundary line between these kingdoms will always remain unsettled! Still less is it possible to maintain that they are really but one kingdom. More exact observation has disclosed a single test that is always certain—not because it lies on the surface, or forces itself on our attention, but because it goes to the very bottom, and reveals

not only difference, but opposition. It also gives a profound insight into the processes of life, and calls for a renewal of the admiration so often felt by the student as he contemplates the matchless harmony of nature. Although this subtle distinction is a discovery of science, it does not, therefore, lie beyond common apprehension. Science in all its departments is the fruit of careful and continuous observation, and its marvels may be understood by any ordinary mind that will exercise the same qualities by which they were first discovered. The cardinal distinction between plants and animals will easily be comprehended by any person who has studied the doctrine of forces and motions as set forth in the preceding essay of this series. It is now known that plants can feed on inorganic substances only, and during the process of nutrition throw off oxygen gas; animals, on the contrary, must feed upon organic substances originally supplied by plants, at the same time absorbing oxygen and exhaling carbonic acid gas. These differences in the mode of nourishment are of great significance, and mark a complete opposition in the nature of being. Plants store up the energies, the wealth of concrete motions, which animals, like rich men's sons, expend; accepting as the basis of their vegetable life those elements which have already, by complex union with each other, or with oxygen, the great element of change in the material world, parted with all the stores of force they are able to spare. While thus depleted, these elements are powerless, and can contribute nothing further to the vast current of life-forces that is sweeping through the world. In this helpless condition they are seized upon by plants, which expel a portion of the oxygen, and break up the complex combinations into less intimate ones; the strong springs of chemical attraction are forced more widely asunder, and these elements thus prepared to manifest new volumes of power whenever permitted to return to the old combinations. Of course plants have no power in themselves to unlock the giant grip in which oxygen holds the captive particles of other elements, or to break up the union of mutually attractive particles. The force with which a locomotive rushes along its track is far less than that exerted in the composition of the trunks of the trees under the shadow of which it passes; and as plants can have no inherent power, all this must be obtained from some foreign source. The rays of heat and light which fall on each leaf in a forest, and on each blade of grass in a meadow,

come with a silent power that baffles all human calculation. The sun, through the organs of vegetable life, wages a ceaseless war upon all accessible compounds of oxygen and of certain other selected substances. This strange war goes down into the soil as deep as the tiniest rootlet pierces, and up through quivering twig and stem out to the point of every leaflet. The spoils of the victory consist mainly of quantities of carbon, hydrogen, and nitrogen which are combined in various proportions with each other, and stored away in solid form in the body of the plant, or in leaf, flower, or fruit. Some oxygen, too, is retained after the greater part is driven off, but the conquest, in its case, is perfect, and the captive is made serviceable for the general good—using its vast power, not to prematurely burn and destroy the new vegetable compound, but to harmonize and bind the whole together. From the carbonic acid which always floats in the atmosphere, carbon has been obtained. Water has furnished a solvent for various solids, and thus facilitated their movements, and also when decomposed has given all needed supplies of hydrogen. From ammonia and the different solid combinations of oxygen and nitrogen which exist in the soil, the latter element, the great stimulator of vegetable growth, has been obtained. After these substances, and a few others equally necessary, though less in bulk, are thus gathered, the plant becomes a perfect magazine of force. It contains three gases in a solid or semi-solid state which scarcely any conceivable power is able to condense separately, and which therefore are capable of exerting, when decomposed, an expansive force as great as that of imprisoned steam or gunpowder. It also has one solid substance, carbon, which under its various forms, as wood or coal, is the great heat-producing material of the world. The work of the plant in accumulating vast stores of expansive or calorific forces is complete. It may die, but for a time at least its garnered treasures remain intact. Then, if not appropriated to some other use, they decay—that is, unite with oxygen, and assume the form of gases, to be dispersed abroad, and perhaps gathered again by the same agency as before.

But this dispersion is not the normal order of nature. At this point the work of the animal usually begins. It can feed only on vegetable organisms, or on that which although found in the body of another animal was accumulated by vegetable agency and has not yet passed through the series of destructive

changes to which all organisms tend. When these vegetable stores are devoured by the animal, they serve two purposes: they supply heat, and generate nervous and muscular power. In the higher animals, which will serve, with a few insignificant qualifications in details, as specimens of the whole class, oxygen is drawn in through the lungs, absorbed by the blood, and carried to every part of the body, where it searches out all accessible particles of carbon and unites with them, or, in popular language, burns them up. The carbonic acid which results from the burning is floated back to the lungs and expelled in the breath, while the heat produced from the combustion is evolved with great regularity, and is a necessary condition of all animal life. Nitrogen, hydrogen, phosphorus, and the minor elements that have been brought together by the subtle chemistry of the plant, are now separated and pass into new combinations, liberating as they go stores of force which may, according to circumstances, appear as heat; contribute to the further growth of the organism, or, as is more frequently the case, supply force for the maintenance of the various motions the animal exhibits. This latter force may take the form of nervous energy, causing the muscles alternately to relax and contract, and thus producing all possible bodily movements; or, in man, it may even supply the brain motion necessary to intelligence and volition. As you, reader, peruse this page, the turning of the eye, the exertion of the arm and hand by which you sustain the JOURNAL, and all the reflections that may arise in your mind concerning these singular phenomena, are only another form taken by the force that some plant gathered from the outflowing waves of the sun, for your service, perhaps ages ago! Do not throw down the book and exclaim that this is bald materialism, reducing the whole of life and spirit to the mere oscillations of a universal self-regulating machine. Reserve your decision upon that point until you have looked a little further, and allow us to go quietly forward with our explanation. Which of these forms the plant-force, or, to speak more accurately, the sun-force, stored in your blood, will assume, depends to some small extent upon your will; but for aught the writer can ascertain, you must content yourself with being, not a creator, but a mere director of force, and even this prerogative you can only exercise under very close and stringent limitations.

Thus we picture the vital world in its two

most general divisions. Life is a mighty hill-side toward the top of which one class of being is continually hoisting huge weights, in order that their downward roll, when dislodged, may supply the momentum exhibited in the activities of the remaining class. From the tiniest insect to man himself there appears to be no other source of life and power. And when the short day of each animal's existence has closed, its body goes back to its original elements, there to be again employed, in addition to the worn-out material thrown off during life, as the food of plants; and these in turn deriving their life from such elements, even while they manufacture them into nourishment for new generations of animals. Thus each class provides sustenance for the other, and the alternation maintains the grand rhythmic movement of life.

One qualification, already referred to, needs to be insisted on, that the perfect accuracy of the above statements may be apparent. A plant may decay before it is used as food by an animal; in this case its accumulations of force, which might have furnished strength for the gallop of a horse or the soaring of an eagle, are dispersed to the winds or taken up, while decomposing, by other vegetable organisms. The potato which rots is incapable of furnishing food for man, but may be recombined into a potato, an apple, or a peach, when struck by the root of a new vegetable or tree. In the same manner the body of an animal, instead of decaying at death, and allowing the elements gathered into its organism—elements which a longer life would have separated from their contained force and then rejected—to be dissolved, thus supplying either in air or soil nutriment for the augmentation of plant-life, may be eaten by another animal. But the circuit of changes, in this case, is only lengthened, not broken. An eagle may snatch a fish from the mouth of a hawk, but the transfer is no gain to the fish; it fares just as it would if caught by the eagle direct. It has only passed through another hand, or, rather, another mouth. When the decomposition of the atoms gathered by plants is arrested in the body of one animal by the transfer of that body in whole or in part to another animal, the process of dissolution is resumed where it was arrested, and in due time, if no further transfer takes place, is completed. Thus the pendulum of life swings back and forth forever!

From the above review we are justified in regarding plants as simply the purveyors of animal life. They rise above the inorganic

world and subordinate its forces to their use, only that another and higher world may rest upon them. They are not an end in themselves, but simply a step on the way to more exalted existence. But while this seems to be their principal purpose, they bestow many subsidiary benefits upon man. They clothe the earth in beauty, and are the theme, in their various forms of trunk, and foliage, and bloom, of every poet's song. But they do more than minister to the love of the beautiful. Without them to stand between us and rude unorganized matter, we could not exist. Man's dependence in this respect is shared by animals of every grade. In all ages since life first originated upon the earth, the two co-ordinate factors of existence probably sustained the same relative position they now hold. It is certain that animals could not have preceded plants, while as far back as the testimony of the earth's strata will carry us, animal development runs side by side with vegetable growth.

It need not be thought wonderful if along with so many contrasted qualities there should be found some strong points of resemblance in the composition of plants and animals. The bulk of the bodies of each must be made of ingredients not widely dissimilar. The plant is storing away materials for the use of the animal; and the animal, in its various tissues, must be largely composed of this material not yet destroyed by being resolved into force and waste matter. This inference is abundantly confirmed by observation, and the further remarkable fact disclosed that the same form is usually maintained by this material through all grades of organization, in both classes of existence. Researches with the microscope reveal a tolerably uniform "physical basis of life." The tangled moss and the lofty pine, the crawling worm and the humming-bird with its gem-like brilliancy and rainbow hues, are alike built up in nearly all parts of their structure by means of tiny cells, too minute usually to be discerned by unassisted vision. These cells are commonly filled with a watery fluid, which is sometimes more condensed near the center. When in such situations that it can be studied, this fluid exhibits singular currents and miniature whirlpools. It is never still. There seems a fatality of motion resting upon it. The sides of the cell vibrate, and sometimes slowly expend and contract. Some cells appear as if worn out, being empty and their sides pressed into close contact. The lining of more vital parts is frequently composed of such superannuated cells.

The movements and accompanying phenomena of this watery fluid have led to the conclusion that it alone is vital, and that the walls or containing membranes by which the cell retains its form are merely the waste particles thrown out from its current. The nuclei are regarded simply as centers of greater condensation and activity. The cell-form itself is not considered as absolutely necessary to the exhibition of the phenomena of life, for it is sometimes absent. A few of the lowest forms of animal life seem to be composed of this singular matter, nearly pure and with no perceptible distinction of parts or organs. Where the cell-form is most fully developed it does not limit the circulation of this wonderful fluid, which passes slowly through its walls, thus maintaining a circulation through the most solid parts of the stems of plants and the flesh of animals. The name of protoplasm has been suggested for this fluid, as it was supposed to be the raw material out of which all organic forms are built. Through its agency cells are constructed and the process of growth in every living thing carried forward. Though we speak of it as a substance, it is not however always the same either in form, consistency, or chemical composition. It is not an element like iron or lead, or even a definite combination like ammonia or starch. Oxygen, hydrogen, carbon, and nitrogen are, however, its principal elements, and its properties are nearly constant. It is well known that one element in a compound may often be substituted for another in equal measure, and the character of the compound not widely altered. Thus soap may be made from a base either of soda or of potash. In protoplasm many separate elements may be replaced by similar ones, and the life-giving properties of the compound not seriously affected either in plants or animals. Besides the principal elements we have mentioned, it contains traces of all others that find a place in organisms. Plant tissues already made up of protoplasmic cells, are taken into the stomach of animals, and by digestion are liberated from their mechanical adhesion, and thrown into the channel of the blood; by this they are carried to every organ, and the cells received into flesh and bone. There they form the vital part of the whole body, all the remainder being merely the material which the cells have deposited for its appropriate office. Lime is gathered out for the bones, and either increases their bulk or takes the place of particles which have already served their purpose, and are now being rejected. Fibrin, casein, albumen, and all other bodily compounds are

selected in the same manner. As the oxygen of the blood comes in contact with a protoplasmic cell, either in its own current or in the flesh, under favorable circumstances, it is oxydized or burnt and all its force set free.* It is now worthless, and is tumbled into the tide of the blood, if not already there and borne away, while a fresh cell taken from the blood is inserted in its place. Other chemical unions take place perpetually to supply the call for force or heat, and each such union destroys an equivalent portion of protoplasm. Thus the work goes on. Each word spoken, each movement of the arm, each breath drawn, destroys some of this substance of life, and were the waste not perpetually supplied by the untiring mechanism of plant-life in compounding our food, we would soon find that the organization upon which all our powers rest had slipped away beneath us.

The conclusions regarding protoplasm which are summarized above have given rise to no small amount of discussion. Some scientific men of the first eminence have maintained that this singular substance is not merely the necessary foundation of life, but also its efficient cause. The two doctrines are by no means identical. We admit that only in some of the isomeric forms of protoplasm, alternately gathered in the vegetable world and expended in the animal, can life, such as we are acquainted with, be manifested. To pass beyond this and declare that life in all its forms is the simple product of protoplasm, is a long, and possibly an unsafe step. Prof. Huxley, however, who may fairly be regarded the very first of living naturalists, advocates this view without qualification, and makes light of all its supposed theological consequences. He is candid enough to warn his pupils, that in giving their assent to his propositions they place their feet "on the first rung of a ladder which in most people's estimation is the reverse of Jacob's, and leads to the antipodes of heaven." He is not greatly concerned in view of these grave consequences, but endeavors to fortify his position by a striking analogy.

Water is the most familiar of all substances. It is made up of two elements, oxygen and hydrogen, which are totally unlike it in almost every conceivable way. Yet all the properties of the water are ascribed to its component elements, and not to some unknown thing called "aquosity." When the elements of protoplasm

disappear from other combinations under the influence of pre-existent living protoplasm, what right have we to introduce an unknown something called "vitality" to account for the resultant phenomena?

"If the properties of water may properly be said to result from the nature and disposition of its component molecules, I can find no intelligible ground for refusing to say that the properties of protoplasm [these must include life, thought, and will.—W. P.] result from the nature and disposition of its molecules."—*Huxley's Lay Sermons*, page 138.

There are two speculative difficulties to which these views give rise. The first is the absolute sweeping away of everything but matter in the universe. If all mental and even moral action be but the result and expression of certain changes in the particles of a subtle kind of matter, there is no spirit, as a separate existence, possible. Nevertheless Huxley declares that he is no materialist, and it is well to give him the benefit of his explanation. It does not seem to be a satisfactory defense against the word "materialism" itself, but certainly is against the ideas usually associated with that word. When spirit, as an independent existence, has vanished out of sight, after our investigations have passed a certain point, we are reminded that if we work in an opposite direction, matter also vanishes, and thus we have no certain knowledge of real existence at all. We are obliged to confess our absolute ignorance of the essential nature of anything. How can a man be charged with materialism in the common sense of the term who does not feel sure of the existence of matter at all? This is a fair, though necessarily brief statement of Huxley's position.

This first speculative difficulty we do not consider really formidable. Grant the extreme can be asked in regard to the material origin of vitality—grant that all vegetable and animal existence, from the obscure life of a sponge to the loftiest conceptions of human genius, flow from the union of four material elements under conditions as yet unknown, and what is the result? Truly, if we reach such a conclusion while retaining in our minds the ideas of nature and matter that are frequently held—the idea that they are independent existences, and that the utmost even God can do is occasionally to interfere with their laws, as a king might meddle in the affairs of a neighboring state—we find ourselves in a terrible plight. We are not only degraded in our own being, but find ourselves transferred bodily from the rule of

* What these favoring circumstances are is a question of no small difficulty. Nervous agencies play a very important part. Great muscular or mental exertion increases the rate of oxydation, and sleep reduces it.

God into subjection under the inexorable laws and blind necessity of the material world. But if that conception of matter be received to which science steadily points, the conception which regards each particle of it as the center of forces that can not be physical in their origin, we have gained some very curious information, but are just as far from the solution of the mystery of existence as ever. We learn that animated existence runs side by side with organization of certain kinds, but that one is the cause of the other is more than we are able to assert. Each activity or surface-manifestation of life coincides in time and amount with certain material changes; but when we keep in view the obverse truth, that each phenomena of matter is known to us only as a mental state—that our own minds mirror all we can know of the universe—and that between each mind and all outward things there exists no mode of communication except force and motion, our ideas of matter become so etherealized and sublimated that the prospect of an eternal connection of our mental powers with organization would present no terrors. The question proposed at the beginning of this essay would return under a somewhat changed aspect: Are not, after all, matter and vitality but one thing? the only difference being the point from which this unknown something is viewed. Whether matter is vital in all its parts, and whether consciousness, which accompanies vitality in its higher forms, really runs in some dim way through rocks and metals, sea and air, and all existing things, is a question to be settled from other considerations than any yet advanced—considerations of a mental rather than a physical character. The unity and harmony of all things, making a universe and not a chaos, affords strong reason for believing that one mind, and not countless millions, rules everywhere. Certain it is, that if either of the inseparable factors of being, matter, and mind is to be considered the cause of the other, it is more rational to assign the pre-eminence to the latter. Even if they are to be regarded as co-existent, mind, which in the limits of our own experience consciously directs and controls matter, is to be regarded as the ruling power. Neither human freedom, nor human accountability, nor any other prerogative of the invasion of which man might feel jealous, is affected in the slightest degree by the discovery that its exercise takes place simultaneously with certain molecular changes in his physical structure. The discovery of the means through which thought, intelligence, and volition work

does not lessen the obligation to work them aright.

We infer, then, that the horror of materialism, so often expressed when mind is brought into any kind of relation with matter or dependence upon it, is unfounded. When we are permitted to see how the forces of the material world, such as appear in the rushing river, the lightning flash, or the heaving volcano, are not only subjected to the use of man, by the appliances of his knowledge, in the realm of outward nature, but are also woven with infinite skill into the very fibers of his flesh and brain, and there made subject to his lightest wish by a mechanism compared with which the most delicate machine of human manufacture is coarse and clumsy, we are surely not degraded, but exalted. We ought not to cavil and hurl the epithets of "godless materialist" and "brutal atheist" at those who have made such marvelous discoveries, but direct all the reverence of our nature in devout thanksgiving to the Author of so much beneficence.

But the second speculative difficulty to which we have referred is more serious than the first. By getting clear of low and vulgar notions of matter, we may be willing to admit our alliance with it without a sense of degradation. But a revulsion of feeling is almost sure to follow, and we begin to tremble for the permanence of that alliance. A portion of the protoplasm upon which our existence depends perishes with each action we perform. That, however, is no ground for uneasiness, as the supply furnishes a trustworthy compensation for the loss. But after an uncertain interval of balanced waste and repair, our whole mechanism ceases to work, and soon after dissolves into its original elements. The organism of the human being has perished! If the whole life, mind, and will of the man, all that goes to make up himself, resulted only from the union of the now scattered elements of his body, what remains of his individuality? a question not difficult to answer upon the given premises; but the answer is the dreariest possible to human speech. It is the bearing of the new doctrines upon immortality that causes "most people" to consider Huxley and his disciples as beginning the descent of a ladder so unfortunately situated. The particles of matter survive as the material for new constructions of life, but the personality of any particular individual is gone forever! It is hard to state such a doctrine in terms that are not icy-cold and repulsive. The instinctive longing of the

human soul for continued life finds no consolation in the prospect of such a succession of existences as is here presented. That some one else will live after I am dead may be very gratifying in a general way to the philanthropist, but it will not *to me* balance the horror of my own absolute extinction. We would not, according to these views, need to have written over our graves, "This is an eternal sleep," for the very particles of our bodies would be passing through ceaseless rounds of life and activity; but how could we rejoice over this if *our* personality and identity had perished beyond the hope of resurrection?

In seeking relief from this iron logic, which leads unerringly to the grave and seals it more firmly than with Roman seal, we must not ask too much of human knowledge. Science will not prove immortality. In all her shining pages there is not a sentence written concerning the future life. The utmost we can hope is to extract from her teachings on other subjects the assurance that such a life is not impossible. That concession, if we can fairly gain it, is enough. We can then commit to religion the sweeter and nobler task of lifting the vail of the future, and directing our eager eyes to the vistas of eternal life.

In the apparently conclusive demonstration of mortality given above, there are two weak points. Assumptions may be indirect and unexpressed, as well as formally made, and are then far more dangerous. In this case one assumption is boldly made by Prof. Huxley, and supported by a plausible analogy. The other arises instinctively in the minds of all observers of the phenomena of death, but should none the less be carefully scrutinized before it is admitted. We will examine these in their order.

It is *not* proved that protoplasm is the directing agent in man. It *may* furnish a receptacle for the all-controlling spirit, giving it, in compact and available form, the necessary material forces through which alone it can have an entrance and a manifestation in this material world. The very analogy of water points in the direction of this possibility, not to say probability. When water is compounded of its two elements and exposed to the open air it begins to absorb invisible gases. Nothing would have been more incredible in a former age than the assertion that water was full of countless pores which were always, under *ordinary* circumstances, filled with invisible substances—the air itself penetrating the ocean and all other bodies of water, and rendering life for fish and other marine animals possible.

Science has but recently discovered this, and is it not allowable to conjecture that nothing is found in protoplasm beyond its cardinal elements and their occasional modifications, only because the vision of science is not even yet keen enough to see every class of existence? Should such a supposition be admitted as possible, it abolishes all conflict between science and the Biblical account of man's creation. The latter declares that God "formed man of the dust of the ground." This is a vivid and poetic expression of the fact that the soil is the great source from which the elements of the human body, in common with the bodies of animals, are gathered. But the account further declares that God "breathed into his nostrils the breath of life; and man became a living soul." Of this transaction science can as yet say nothing; but there appears no intrinsic improbability in it. The protoplasmic foundation having been prepared—doubtless according to the ordinary agencies of nature, for the omission of the statement of these from the account does not prove their non-employment—an emanation from God himself, an out-breathing of his own nature, may be given to each man, and retained by him, as a permanent possession, constituting the essence of his personality either alone, or in connection with a new organization, after the present combination of bodily elements shall have been dissolved.

The second assumption, which arises instinctively when we stand by a corpse, is that all the organization of matter which belonged to life is now contained in the cold body, and will soon be utterly destroyed. This is no doubt true of all forms of matter which our senses have enabled us yet to discover; but the assumption that there can be no undiscovered kinds of matter is purely gratuitous. The invisible gases were once unknown, and to have then concluded against their existence would have been most unphilosophical. Afterward, and in very recent times, the planetary spaces were called absolute voids, but now the belief in some medium which fills the whole solar system, is well-nigh universal. The greatest advance toward a rational physical conception of nature, and at the same time the best illustration for our purpose, is furnished by the undulatory theory of light. The phenomena of vision are of such a character that, in seeking to account for them, scientists have been obliged to assume the existence of a subtle, refined ether, differing in many particulars from any known kind of matter, filling all space

and existing in the very substance of some of the most solid bodies. Now, while the exigencies of science require belief in such a wonderful, all-pervading, and utterly imperceptible element as this, which it yet declares to be matter, it is surely a great stretch of presumption for the same science to declare that there *can not* be any kind of matter which, eluding detection at death, maintains its organization, and preserves the germ of existence, together with personality and identity. The mind, in its operations, is far more removed from the domain of ordinary matter than light; and if it be philosophical to give the latter a body of its own which no human sense has yet perceived, but dwelling in and around all outward, coarser objects, it can not be absurd to conjecture that there may be, enshrined within the visible human body, another material body, surpassing common air in lightness, delicacy, and mobility of substance as much as that does iron or lead; or perhaps we should rather say, surpassing the luminiferous ether as much as that does the most volatile gas. We only know matter through its motions; and if any substance be too ethereal to set our nerves in vibration, through eye or ear, or touch or any other sense, we would remain in ignorance of its existence unless revealed to us as an inference from some of its effects. Therefore if such a hidden body within the visible body did exist, it would be beyond the reach of human discovery, except so far as revealed by mental phenomena, or by the persistence of conscious existence beyond death.

While therefore it remains possible to make a conjecture which reconciles immortality with physical knowledge, we can not accuse that knowledge of destroying our hope in a future life; for we must ever bear in mind that science, dealing with the existences now around us, which alone are submitted to her investigations, can not be expected to project her light far toward a future and changed world.

To sum up, then, the conclusions of this essay, we have seen that the existence of unorganized matter with its strange and complex forces, renders possible the existence of plants; that these in turn, with their garnered stores of easily disposable power, render possible the existence of animals; and there is still room for a plausible conjecture that animal life, with its mastery of the elements of material nature, renders possible another and yet higher kind of existence—that which can comprehend all lower gradations, and which will continue to exist during the whole of their evolutions. This

last may be the result of some fine organism which the human senses have not yet been able to detect, or it may be another element altogether—even that which under the name of spirit is believed in over the world. But short of this last conjectural existence, there is no reason to conclude that life in plant or animal is at all different in nature from the forces which are investigated by physical science. Is this an acknowledgment of the universal vitality of matter? We have already seen that the study of physical phenomena leads necessarily to the belief—either that each particle of matter is the center of self-determining forces of infinite complexity, and possessing sufficient knowledge and power to regulate itself according to the position and number of all other particles in the universe, and in such harmony with them as always to work co-operatively toward the same ends. The study of plant and animal life does not change the alternative. All their phenomena result from the forces of matter; and if we can decide that the particles of a pebble held in our hand are really aware of the amount of matter not only in the whole earth, but in the planets and the most distant fixed stars, and able of themselves to draw toward that matter across void spaces, in exact proportion to mass and distance, we will not find the further declaration, that similar particles in the body of animal or man do give rise to life and consciousness, at all difficult to accept. But to the writer it appears at once more satisfactory and philosophical to throw the whole mystery into a single mass by regarding all phenomena as proceeding from an invisible, omnipresent, intelligent Being, who touches matter (whatever it may be) at the point of its attractive and repulsive forces, and thus keeps firm control over each particle alike in organisms and outside of organisms—acting, however, always in a regular and unchangeable manner. This, equally with the other view, reduces all of nature into an harmonious system, whose laws may be searched out, but which rests at every point upon the unknown and unsearchable. If this conclusion appears vague and disappointing, we can not help it. It is thus that the Bible represents God and nature; and science working alone has no other choice than to concentrate the mystery into one all-embracing being, or to diffuse it, multiplied a million-fold, into each atom of the universe. When the much vaunted “vitality of matter” is thus resolved into its simplest elements, it does not appear very alarming to Christian faith.

CATHEDRAL MUSIC.

REV. Henry Ward Beecher (Congregationalist) gives his impressions of the Episcopal service as rendered in English cathedrals. The interpolated remarks are by the editor of the *Baxter University Record*. The article is an abridged extract from a "Star Paper" of Mr. Beecher, showing the power of the "choral service" to satisfy and exalt a devotional spirit. It describes his participation in a Sunday-morning service during his first visit to England.

"I can not tell you how I was affected. I had never had such a trance of worship, and I shall never have such another view until I gain the gate.

"I am so ignorant of the church service that I can not call the various parts by their right names; but the portions which most affected me were the prayers and responses which the choir sang." [Mr. Beecher probably refers to the prayers appointed to be said by the minister and the people in unison, and to the responsive supplications of the Commandments. The choristers never sing the other prayers.] "I had never heard any part of a supplication or a direct prayer *chanted* by a choir; and it seemed as though I heard not with my ear, but with my soul. I was dissolved—my whole being seemed to me like an incense wafted gratefully toward God. The Divine presence rose before me in wondrous majesty, but of ineffable gentleness and goodness, and I could not stay away from more familiar approach, but seemed irresistibly, yet gently, drawn toward God. My soul, then thou didst magnify the Lord, and rejoice in the God of thy salvation!" [What follows would seem to have been his impression during the antiphonal or double-choir rendering of the Psalter, which is a noticeable feature in the service.] "And then came to my mind the many exultations of the Psalms of David, and never before were the expressions and figures so noble and so necessary to express what I felt. I had risen, it seemed to me, so high as to be where David was when his soul conceived the things which he wrote.

"Throughout the service, and it was an hour and a quarter long, whenever an Amen occurred, it was given by the choir, accompanied by the organ and the congregation. O that swell and solemn cadence rings in my ears yet! Not once, not a single time did it occur in that service, from beginning to end, without bringing tears from my eyes. * * * I trembled so much at times that I was obliged to sit down. Oh, when in the prayers breathed forth in strains of sweet, simple, solemn music, the love of Christ was recognized, how I longed then to give utterance to what that love seemed to me. There was a

moment in which the heavens seemed opened to me, and I saw the glory of God. * * * I never knew, I never dreamed before, of what heart there was in the word *Amen*. Every time it swelled forth and died away solemnly, not my lips, not my mind, but my whole being said—Saviour, so let it be."

[It is the grand and exquisite music served up in several of the Roman Catholic churches in New York which attracts large numbers of Protestants. Call it "impious," "going over to Rome," or what you will, the largest numbers are usually found where there is the best music. Granted that Mr. Beecher is one of the most popular preachers living—and that hundreds of strangers go to hear him, *he* is worldly-wise enough to have the best music of the sort that can be found in the State of New York. The Methodists are celebrated for their simple, earnest, and pathetic music; and other churches which would be thrifty, can not afford to ignore good music. Mr. Beecher's testimony is not that of enthusiasm; it is that of the intellect, describing healthy emotions produced by profound worship and exalted vocal and instrumental music. When the organs of Time and Tune combine with Veneration, we have those heavenly strains which lift men up and transport them to realms above.]

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"THE KINGDOM WITHIN."

ONE has to analyze but for a moment the workings of his own mind to perceive that outward circumstances by which he fancies his actions controlled are often far less real than he supposes. The gloomy and disordered pictures upon which he so reluctantly gazes are evolved from within rather than impressed from without.

It is true that there are real sorrows deep enough, and real misfortunes heavy enough, to weigh down the bravest heart and darken the most hopeful life; from these but few, if any, of earth's children escape, but out of such inevitable shadows the true soul will at length emerge stronger and more trustful, if less buoyant, than before. But the sum total of human suffering is not made up of realities. Discord within will find its corresponding discord without. Nature, with all her glorious train of harmonious changes, furnishes an inexhaustible theme for the fault-finding of an inharmonious soul. A miserly nature is forever tortured by a lack of generosity in others.

An untruthful heart sings ever hopeless songs of faithless friendship and deceiving love. And woe to the temple, however fair, into which jealousy has been once allowed to enter. With what fiendish delight it changes every bright and beautiful thing into blight and decay! "The kingdom of heaven is within," and vain seeker is he who looks elsewhere for it. The power of wealth and position can not create it, neither will streets of gold and gates of pearl reveal it.

Where fortune has seemed to lavish most, still lonely, discontented lives are found, while—

Souls there are, the world's salvation, that can stand alone in life
Stronger in their seeming weakness, than if borne by outward strife;
Waiting not some loud approval, seeking not the applauding din,
Only listening through the silence to the oracle within.

HOPE ARLINGTON.

Physiognomy, or Signs of Character.

Of the soul, the body form doth take,
For soul is form, and doth the body make.—*Spenser.*

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONTINUED FROM JANUARY NUMBER.]

ESSAY I.

OF THE PERMANENT FORM OF THE HEAD AND FACE IN CONTRADISTINCTION TO EXPRESSION.

MUCH has been written, and gracefully and agreeably written, on the sources of Beauty; yet I can not help thinking that, by losing sight of nature, and what may be justly called the philosophy of the subject, the right principle has not been attained.

Beauty of countenance may be defined in words, as well as demonstrated in art.

A face may be beautiful in sleep, and a statue without expression may be highly beautiful. On the other hand, expression may give charm to a face the most ordinary. Hence it appears that our inquiry divides itself into—the permanent form of the head and face; and the motion of the features, or the expression.

But it will be said, there is expression in the sleeping figure, or in the statue. Is it not rather that we see in these the capacity for expression? that our minds are active in imagining what may be the motions of these features when awake or animated? Thus we speak of an expressive face before we have seen a movement grave or cheerful, or any indication in the features of what prevails in the heart. Avoiding a mere distinction in words, let us consider first, Why a certain proportion and form of face is beau-

tiful, and conveys the notion of capacity of expression; and, secondly, the movements or the actual expression of emotion. I believe that it is the confusion between the capacity of expression, and the actual indication of thought, which is the cause of the extraordinary difficulty in which the subject is involved, and which has made it be called a mystery: *La beauté est un des plus grands mystères de la nature.* [Beauty is one of the greatest mysteries of nature.]

A countenance may be distinguished by being expressive of thought; that is, it may indicate the possession of the intellectual powers. It is manly, it is human; and yet not a motion is seen to show what feeling or sentiment prevails. On the other hand, there may be a movement of the features, and the quality of thought,—affection, love, joy, sorrow, gratitude, or sympathy with suffering,—is immediately declared. A countenance which, in ordinary conditions, has nothing remarkable, may become beautiful in expression. It is expression which raises affection, which dwells pleasantly or painfully on the memory. When we look forward to the meeting with those we love, it is the illuminated face we hurry to meet; and none who have lost a friend but must acknowledge that it is the evanescent expression, more than the permanent form, which is dear to them.

It is a prevailing opinion that beauty of countenance consists in the capacity of expression, and in the harmony of the features consenting to that expression.* The author of the "Essays on the Nature and Principles of Taste" denies any original or positive beauty to the human countenance.

Those who have professedly written on the antique say, that, to arrive at the perfection of the ancient statue, the artist must avoid what is human, and aim at the divine.† But we speak of what stands materially before us, to be seen, touched, and measured. With what *divine* essence is the comparison to be made? When the artist models his clay, he must have recourse to some abstract idea of perfection in his own mind; whence has he drawn his idea of perfection? This brings us to the right path in the inquiry: the idea of representing divinity is palpably absurd; we know nothing of form but from the contemplation of *man*.

The only interpretation of *divinity* in the human figure, as represented by the ancient sculptors, is, that the artists avoided individuality; that they studied to keep free of resemblance to any individual; giving no indication of the spirit, or of the sentiments or affections; conceiving that all these movements destroy the unity of the features, and are foreign to beauty in the abstract.

In proceeding to define beauty, all that the writers on art have been able to affirm is, that it is the reverse of deformity. Albert Durer so expresses himself. If we intend the representation of beauty, then let us mark deformity, and teach ourselves to avoid it. The more remote from deformity, the nearer the approach to beauty. So Mengs: "*La*

* Great names may be quoted—Plato, Cicero, and St. Augustine, down to our own professors. "Et ut corporis est quedam apta figura membrorum, cum coloris quadam suavitate, caque dicitur pulchritudo: Sic in animo opinionum iudiciorumque æquabilitas, et constantia, cum firmitate quadam et stabilitate . . . pulchritudo vocatur."—Cicero. Burton, in the Objects of Love, quotes thus: "Pulchritudo est perfectio compositi, ex congruente ordine, mensura et ratione partium consurgens."

† "Se le figura era humana, vi facevano tutto quello, che appartiene alla proprietà, e qualità dell' uomo. Se poi era divina, esse traslasciavano la qualità umana e sceglievano unicamente le divine."—Mengs. Again, Winckelmann: "La beauté suprême réside en Dieu. L'idée de la beauté humaine se perfectionne à raison de sa conformité et de son harmonie avec l'Être Suprême," etc.—Winckelmann, *Histoire de l'Art*.

bellezza e l'opposito della bruttezza." [Beauty is the opposite of ugliness.] Leonardo da Vinci attributed much to comparison. He searched for ugliness. If he saw an uncommon face,—if it were a caricature of expression,—he would follow it, and contrive to look at the individual in all aspects. He would pursue a curiosity of this kind for a whole day, until he was able to go home and draw it.* We have here the practical result of the theory, which is, to study the deformities, in order to learn to avoid them; and certainly the effect was admirable, since we know, as his biographer has written, that his painting of beauty raised love in all beholders.†

If a painter entertains the idea that there is some undefined beauty, distinct from nature, which is in his own mind, his works will want that variety which is in nature, and we shall see in his paintings the same countenance continually reproduced. We are informed that Raphael, in painting the head of Galatea, found no beauty deserving to be his model; he is reported to have said, that there is nothing so rare as perfect beauty in woman; and that he substituted for nature a certain idea inspired by his own fancy. * * * In the Palazzo Farnesina there are frescoes by Raphael and his scholars, demonstrating to me the nature of those studies which at length enabled him to compose, not

* "Pigliò tanto gusto nel dipingere cose bizzarre et alterate, che s'egli s'imbatteva in qualche villano che con viso strano et alquanto fuor del ordinario, dasse un poco nel ridicolo invaghito dalla bizzarria dell'obbietto, l'haverebbe sequitato un giorno intiero, fin a tanto c'havendone una perfetta idea, ritornato a casa lo disegnava come se l'havesse havuto presente."—Vasari.

† This great painter ascribed much importance to contrast in painting, bringing extremes together,—*ch'ù brutto sia vicina al bello, et il vecchio al giovane, et il debole al forte*; and such appears, on many occasions, to have been the principle which directed the old masters. "The statue of Venus may stand alone; but not so the painting of the goddess by Titian,—there are two hideous old women introduced for contrast.—*The Florentine Gallery*. We may take a further illustration from the finest picture in Italy—the Archangel Michael subduing Satan, which is in the convent of the Capuchins in Rome, painted by Guido. The beauty of the angel is perfect; the face is undisturbed by passion. It conveys to us with how little effort the superior nature subdues the monster who lies howling, and on which he puts his feet. The expansion of the wings is grand; and the manner in which the drapery encircles him indicates the motion of descent,—that he has alighted! We have all the contrast between a face convulsed by bad passion, and the serenity and beauty of virtue."—*Notes from Journal*.

to copy, the beautiful Galatea; that he first drew from what he saw, and finally avoided imperfections, and combined excellences.*

We shall arrive at a better understanding of this subject by inquiring into the peculiar form and beauty of the antique.

OF THE PERMANENT FORM OF THE HEAD,
AND THE PROPORTIONS OF THE HEAD AND
FACE.

Pleased as all are with the variety in the human countenance, and desirous of discovering why, in the antique statue, that is beautiful which is not found in nature, we seek for some means of more accurate survey, some rule by which we may measure proportions.

The scientific principle is deducible from this,—that the outward forms result from the degree of development of the contained organs. The most obvious plan, and that which has been most generally adopted, of examining the proportions, is by a comparison of the size of the head with that of the face; understanding by the head, the brain-case, as containing the organ of intellect; and by the face, the seat of the collected organs of the senses.

But we are not prompted, naturally, to institute this comparison, or estimate the dimensions of the whole head. Both nature and custom teach us, every moment, to scan the features; and to look there for what is to animate, to charm, or to grieve us. Every scheme by which it shall be proposed to elicit the reasons of our feelings of admiration, love, or disgust, by measuring the comparative areas of the head and face, will fail.

Nor will that comparison enable us to mark the gradations in the heads of animals; because the peculiarities in the skulls of brutes either result from, or are connected with, the development, of particular organs. Those organs have relation to the existence of the animal, to its means of procuring nourishment, the pursuit of its prey, or the mode of avoiding its enemies; and the difference in

the relative size of their instruments of prehension, or in that of their ears, eyes, or organs of smelling, will entirely disturb the line of demarkation between the brain-case and the face. The vast mass of the brain in man must have an effect on the conformation of the whole head; it causes the upper part of the face to be thrown forward; thus at once distinguishing him from the brute, and marking superiority of intellect. But when we consider the condition of the lower animals, we must take into our calculation, not intellectual properties, but the instincts of brutes; and the measurement of the face, as compared with the size of the brain, fails us altogether.

I must speak with respect to this suggestion of measuring the face against the head, since it has been entertained by John Hunter, Camper, Blumenbach, and Cuvier. I shall, however, direct what I have to say on the subject principally to the works of Camper.

If we are to study the form of the human head, seen in profile, we must obtain a line, which shall be permanent, on which we can raise a perpendicular, and so commence a more accurate survey than by the unassisted eye.



FIG. 1.—SKULL IN PROFILE.

If we present a skull in profile, or draw it thus with the pen, we may begin by tracing a horizontal line, which shall pass through the foramen of the ear and the alveoli or sockets of the front or incisor teeth of the upper jaw. On this we can raise an oblique line, touching the sockets of the teeth and the most prominent point of the forehead, or of the frontal bone. This is the facial line of Camper; and by its obliquity it will be,

* "Palazzo Farnesina. Saw the Frescoes of Raphael. Some, finished by his scholars from his outline—only one finished by himself. What I most admire is the beauty and variety of his female heads, especially the different manner in which he has bound up the hair and let it flow about the neck and shoulders; and yet he may have found all this, selecting from what may be seen in the streets. Here is the Galatea!"—*Note from Journal.*

to a certain degree, the measure of the relative proportion of the areas or spaces occupied by the brain and the face. Another line

To a certain extent, this ingenious mode will be found useful. Had the Count Caylus been guided by it in his great work on An-

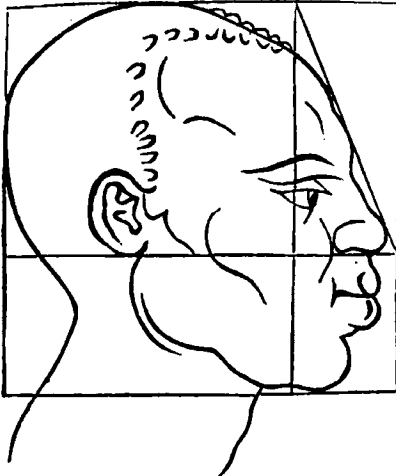


FIG. 2.

may be drawn, which will divide the brain-case from the face; commencing at the foramen in the ear, it will touch the upper margin of the orbit.

On looking to these illustrations of Albert Durer, it is apparent that he entertained and practiced this mode of distinguishing the forms of the head.

But the idea of the facial line was suggested to Camper on examining certain antique gems. He observed that, in imitating these, the artists failed, from neglecting to throw forward the head, so as to make the line which touched the forehead and teeth nearly perpendicular. For by this line he thought that he had got the key to the whole difficulty, as marking the distinctions in the natural head, compared with the antique. He conceived that when he drew a profile so that the forehead and lips touched the perpendicular line, he obtained the characters of an antique head. If, on the other hand, he let this line fall back, and accommodated the outline of the head to it, he diminished the beauty and perfection of the form. For example, if the line formed an angle of seventy, it became the head of a negro; if declining backward still farther, by the depression of the brain-case, say to sixty, it declared the face of an orang-outang; and so down to the dog.

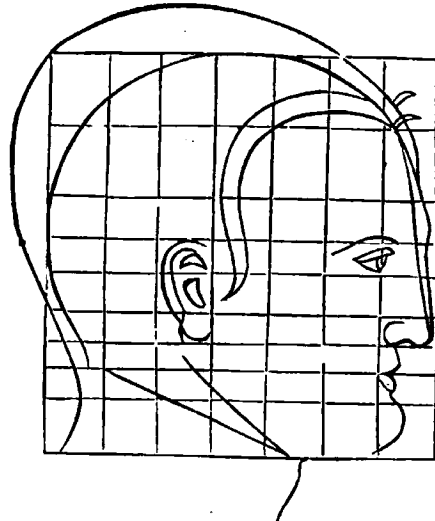


FIG. 3.

tiquities, his figures, in many instances, would have been better drawn. But even in respect to the state of the human brain, this line



FIG. 4.

does not fully answer the purpose. In the skulls of certain nations the depression of the forehead is so great, that the line drawn from

the alveolar processes to the frontal sinus does not even touch the frontal bone.

there is much wanting,—that which measurement or a mere line will not show us.



FIG. 5.

Camper's position is this,—that as, by the diminution of the cranium and the further inclination of the facial line, the head is depressed in character to that of the negro; so by raising and throwing the skull upward and forward, until the facial line reaches the perpendicular, the great object is obtained of resemblance to the antique head.

But his own figures contradict his conclusion; for although he has thrown the head forward in them, even beyond the perpendicular of the facial line, yet as he has preserved the features of common nature, we refuse to acknowledge their similarity to the beautiful forms of the antique marbles. It is true that, by advancing the forehead, it is raised;

the face is shortened, and the eye brought to the center of the head. But with all this,

The truth is, that we are more moved by the features than by the form of the whole head. Unless there be a conformity in every feature to the general shape of the head, throwing the forehead forward on the face produces deformity (fig. 7); and the question returns with full force: How is it that we are led to concede that the antique head of the Apollo or of the Jupiter is beautiful, when the facial line makes a hundred degrees with the horizontal line? In other words, How do we admit that to be beautiful which is not natural? Simply for the same reason that if we discover a broken portion of an antique, a nose, or a chin, of marble, we can say, without deliberation, this must have belonged to a work of antiquity; which proves that the character is distinguishable in every part,—in each feature, as well as in the whole head.

[A different facial angle from that of Camper is here introduced. The following engravings will illustrate degrees of mental development, and the lines and angles of the face and

head by which these conditions are readily made to appear. Fig. A, page 100, Grades

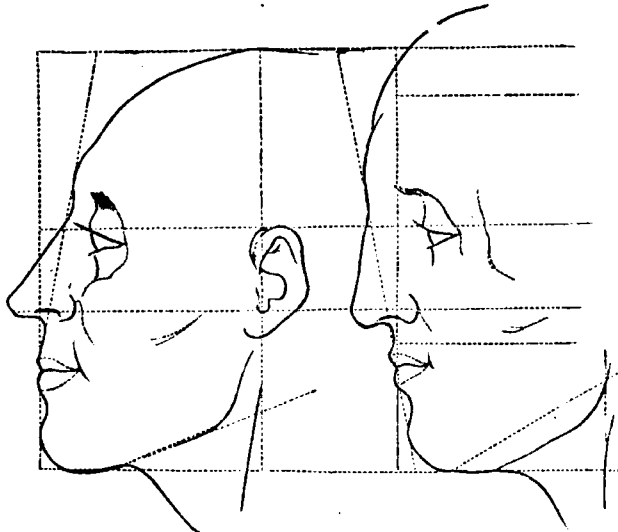


FIG. 6.

of Intelligence, shows five heads, but the angle of the face varying from the perpen-

dicular is very marked. The face of the farthest figure may be no larger than the one in the foreground at the left, but the lack of



FIG. 7.*

brain development in the forehead makes the difference in the facial angle. Let the head be increased in size from the opening of the ear upward and forward, and the face of each will become perpendicular. It has been found that a line drawn from the top of the nose, at the union of the nasal with the frontal bone, to the orifice of the ear, and another line drawn from the opening of the ear to the nasal spine, will form with each other an angle of about 30 degrees; and what is more singular, the same is true in most animals also, whatever the form of the face and nose. Fig. B, Human Skull, represents a well-formed skull, photographed from nature, showing the anatomical structure in general. The angle above spoken of is here represented—*a* opening of the ear, *b* nasal spine, *c* suture uniting the nasal and frontal bones, *d* cranial base line, *e* facial base line. A line drawn through the head from ear to ear passes through the me-

dulla oblongata, which in man and all animals is the center, as it were, the hub, or radial point of the brain. Any measurement which starts at this central point in all brains should be regarded by all students of nature with hope, in anticipation of good results. Fig. C shows the outlines of four skulls, drawn from nature, on one plane, and then reduced from the size of life by the photographic process. The larger outline represents a human skull, *A*, whose length, from the root of the nose to the longest part of the back-head, is $7\frac{1}{2}$ inches. The other outlines of skulls

—*B* the chimpanzee, *C* the cat, and *D* the skunk—are in like manner copied from nature, and bear a just relative proportion to the originals. The line *r*, drawn from the opening of the ear, *a*, to the spine of the nose, we may call the facial base line, and it will be seen that it bears the same relation to the nasal spine of the animal skulls as it does to the human. The cerebral base line, *E*, from the opening of the ear to the suture which unites the nasal and frontal bones at the root of the nose, indicates the base of the anterior lobes of the

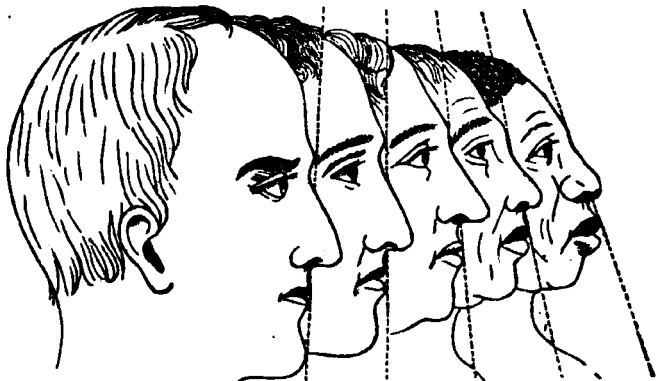


FIG. A.—GRADES OF INTELLIGENCE.

* I have here sketched the profile of a poor begging negro in contrast with the head of M. Agrippa, in which the artist has dignified the character on the principle stated by Camper; but it is here apparent that the manly dignity results from the character of each feature, even more than from the facial line. It is seen in the eye, in the nose, mouth, and chin; each of which is in as much contrast with those of the negro, as is the shape of the whole head.

brain. The remarkable feature of this whole matter is, that these lines, *E* and *r*, form an angle with each other of about 30 degrees. We have applied this rule to scores of skulls, human and animal, in our collection, and the variation did not amount to more than one or two degrees. The best developed human

skull in our possession showed but 29 degrees. When the brain is sufficiently devel-

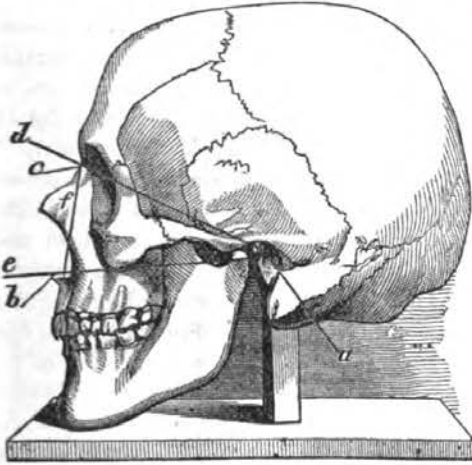


FIG. B.—HUMAN SKULL.

oped forward and upward to give a vertical face, or a face in a line parallel with the spine, as in the better Caucasian types, any additional anterior extension of the brain would tend to lessen the angle of the line E, F, because the size of the face would not thus be increased in proportion to the increase of the brain. Fig. D is an outline of three heads—*a* is that of a first-class Caucasian, with a large intellectual brain, and a face vertical and parallel to the line of the spine. The second, *b*, is the outline of a man of lower type, with a protrusive face, because the brain is not large enough to set the face up vertically; *c* shows the head of a dog, and those lines from the opening of the ear bear the same relation to the nose and to the union of the frontal and nasal bones in it, as in the human, and the lines bear to each

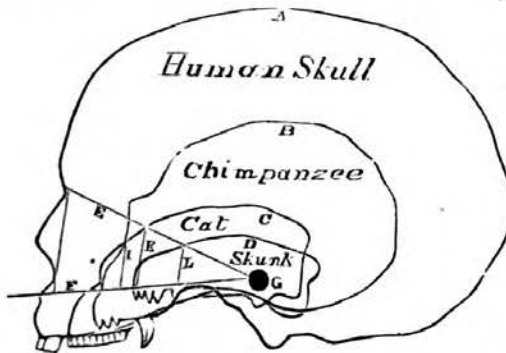


FIG. C.

other an angle of 30 degrees. Thus, having two fixed lines from the opening of the ear,

the one terminating at the nasal spine, just under the nostril, the other at the union between the nasal and frontal bones, we have a basis of measurement applicable to all skulls.

The nose of the inferior human face is quite as long as that on the Caucasian face, but it lies at an inclination; so the dog's nose is long, but his face is still more inclined. The vertical length of the dog's nose and that of the negro's is not nearly so great as that of the Caucasian, as may be seen by the vertical lines shown on the engravings. Imagine brain enough in that negro's skull to push the forehead upward and forward to the outline of the head *a*. The nose would be set up straight according to the higher types of humanity, and the angle of the face be all that could be desired.]

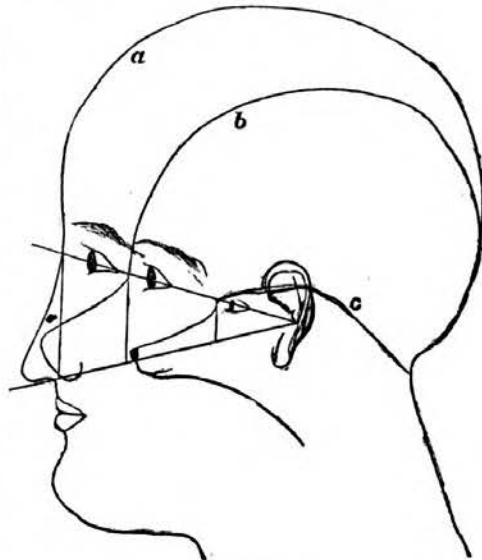


FIG. D.

We must assume a new principle, and it is this—that in the face there is a character of nobleness observable, depending on the development of certain organs which indicate the prevalence of the higher qualities allied to thought, and therefore human. A great mistake has prevailed in supposing that the expansion of some organs in the face of man marks a participation in the character of the brute; that the fully developed nose indicates the groveling propensities, and the extended mouth, the ferocity, of the lower animals. Let us correct this misconception by considering the properties or uses of the mouth. It is for feeding, certainly, but it is

also for speech. Extend the jaws, project the teeth, widen the mouth, and a carnivorous propensity is declared; but concentrate the mouth, give to the chin fullness and roundness, and due form to the lips; show through them the quality of eloquence, of intelligence, and of human sentiments,—and the nobleness is enhanced, which was only in part indicated by the projection of the forehead. Now, look to the antique head and say, is the mouth for masticating, or for speech and expression of sentiment? So of the nose. Here, even Cuvier mistook the principle. The nose on a man's face has nothing in common with the snout of a beast. The prominence of the nose, and of the lower part of the forehead, and the development of the cavities in the center of the face, are all concerned in the *voice*. This is ascertained by the manliness of voice coming with the full development of these parts.* Nothing sensual is indicated by the form of the human nose; although by depressing it and joining it to the lip, the condition of the brute,—as in the satyr, the idea of something sensual is conveyed.

A comparison of the eye and the ear brings out the principle more distinctly. Enlarge

the orbit, magnify the eyes; let them be full, clear, piercing, full of fire, still they combine with the animated human countenance. They imply a capacity consistent with human thought, a vivacity and intelligence partaking of mind. But large pendulous ears, or projecting and sharp ears, belong to the satyr; for man is not to be perpetually watchful, or to be startled and alarmed by every noise.

If we consider for a moment what is the great mark of distinction between man and brutes, we shall perceive that it is *SPEECH*: for it corresponds to his exalted intellectual and moral endowments. Speech implies certain inward propensities, a conformity of internal organs, and a peculiarity of nervous distribution; but it also implies a particular outward character or physiognomy, a peculiar form of the nostrils, jaws, mouth, and lips. These latter are the visible signs of this high endowment.

Then, again, as to sentiment,—laughter and weeping, and sympathy with those in pleasure or in pain, characterize human beings, and are indicated by the same organs. Hence the capacity of expression in the nostril and mouth are peculiar attributes of the human countenance.

[TO BE CONTINUED.]

PROGRESS OF PHRENOLOGY.

THIRTY-THREE years ago Phrenology was but little known in this country; and comparatively few understood it to-day. At that time the PHRENOLOGICAL JOURNAL had a bare existence, with a few hundred subscribers. There was, perhaps, but a single American book on Phrenology, and that not very widely read. Now, we have a long list of publications—several heavy volumes, and a large number of medium size. Of these we have published hundreds of thousands of copies. They are read more or less wherever the English language is spoken. The PHRENOLOGICAL JOURNAL, which was a thin pamphlet in the beginning, has come to be, as to size and appearance, a magazine of the first class, having a circulation of more thousands than thirty years ago it had hundreds. Now, Phrenology is understood by

many clergymen, and constitutes the flavoring element of all their discourses. They employ it as the proper means of analyzing the human mind and comprehending its complex nature, which for ages has been a mystery. It is working its way into our courts of justice. When a criminal is arrested, his phrenological developments are considered as to whether he is so organized as to be responsible. It has found its way into schools and colleges; systems of education are modified. Modes of treating criminals, and especially of treating the insane, have been reformed. Parents, in their domestic management, have sought its aid, and been guided in the proper treatment and training of their eccentric and peculiar children. It has been consulted relative to the selection of proper vocations, trades, and professions. There are many families who would not think of putting a boy to a trade or profession without first consulting Phrenology;

* These cavities do not exist in the child, and only attain their full size in the adult.

and though they are not sufficiently versed in the subject to decide the questions satisfactorily for themselves, they seek the aid of those who make Phrenology a profession. The question What can I do best? is now often asked with all sincerity; not "What would I like to become?" but "What am I best fitted to become?" This we regard as one of the main features of the value of Phrenology. If all men could be rightly placed, could have congenial occupations in which their talents and their tastes could be combined, success, prosperity, and ultimate happiness would be the result. Phrenology has already done this for thousands, and the day is not distant when millions of our countrymen will seek phrenological aid, in reference to the great duties and events of life, as we seek engineering aid if we wish to construct a railroad or navigate a ship.

Phrenology is also seasoning literature. The novel writer describes his characters according to phrenological principles. The daily press speaks of men with "foreheads villainously

low," with "strong development of the animal propensities," with "little or no Cautiousness," with "a predominance of Self-Esteem and Approbativeness." These phrases are becoming so common that the people who have not fought this battle, and seen Phrenology endure its early history of opposition and ridicule, would hardly recognize the fact. They hear Phrenology spoken of and referred to as a matter of course. They do not know when it was not so, and, we may say with pleasure, many thousands would as soon think of disputing the multiplication table as to doubt the genuine truth of Phrenology—and they are right.—*Annual of Phrenology and Physiognomy for 1872.*

ENJOY thy existence more than thy manner of existence, and let the dearest object of thy consciousness be this consciousness itself. Make not thy present a means of thy future; for this future is nothing but a coming present, and the present which thou despisest was once a future which thou desiredst.

Department of Our Social Relations.

Domestic happiness, thou only bliss
Of paradise that has survived the fall!
Thou art the nurse of virtue.

A BIRTH-DAY PARTY.

ON the roll of eminent benefactors of the deaf and dumb there are few names better known or more honored than that of Harvey Prindle Peet, Ph. D., LL.D. At Hartford, nearly half a century ago, he was first the pupil, then the associate and peer, of T. H. Gallaudet and Laurent Clerc. In his later manhood, he stood in the foremost rank of educators and educational writers. The Institution which he built up, from a small and inferior school to the largest of its kind on either side of the Atlantic, and one of the best appointed and most successful, still flourishing in unexampled prosperity under his accomplished son and successor, and enjoying the benefit of his own ripe experience and unimpaired judgment as its Emeritus Principal, and a member of its Board of Directors, is a splendid monument of his energy, executive ability, and skill in his special profession.

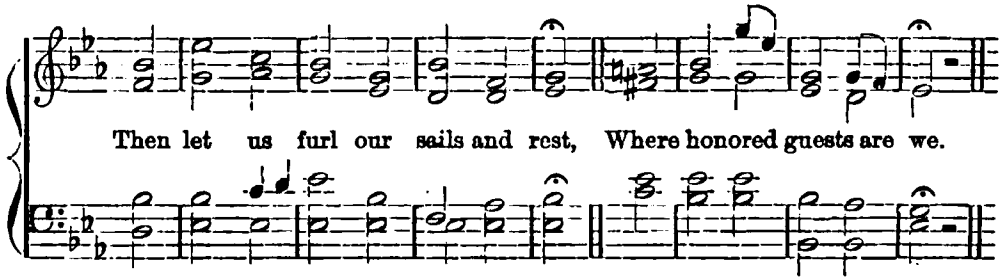
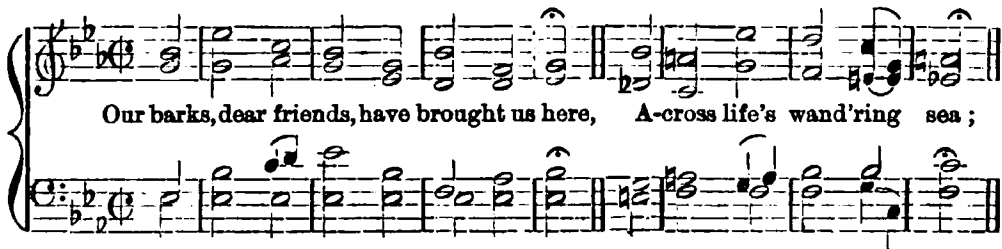
Dr. Peet completed his seventy-seventh year on the 19th of November last. The event was

celebrated by a congratulatory dinner, which, as the 19th fell on Sunday, was observed on the 20th.

Informed by a beautiful rose-tinted missive that "Mrs. H. P. Peet requests the pleasure of your company at the Mansion House, Fanwood, on Monday evening, November 20, 1871, at six o'clock," the writer and his faithful companion, during more than thirty-two years of life's pilgrimage, had the pleasure of paying his respects to their old and honored friend; of wishing him many happy returns of the auspicious day; and of meeting about a score and a half of invited guests, either family connections or, like themselves, very old friends of their venerable host.

The following lines, written by Mrs. Mary Toles Peet, and set to music by Mr. James W. Currier, son-in-law of Mrs. Dr. Peet, and dedicated to the venerable educator, were sung by the party assembled in the parlor, just before taking their seats at the dinner-table:

"Our barks, dear friends, have brought us here."



This little islet in life's main
Holds purest peace and light,
And he who wears its crown of love,
Crowns us with love to-night.

His ship has borne him far and well,
O'er seas we have not scanned,
And he has garnered here the wealth
Of many a wondrous land.

His are not jewels such as blaze
'Mid earthly pomp and glare,
But they will shine 'neath Heaven's own light,
In crowns which angels wear.

As clouds sail from the silv'ry east
Slow to the golden west,
So our life-barks at morn shall float
From this fair isle of rest.

But all the sweetness of his smile,
His blessing pure and free,
Shall cheer us till we hear it said
"There shall be no more sea."

The table was laid in the spacious hall of the Mansion House. The two dates, November 19, 1794, and November 19, 1871, were suspended in wreaths of evergreens over the ends of the table. On the walls, in letters formed of evergreens, were appropriate legends in Latin and English. On one side we read:

"AGE HAS YET HIS HONOR."
"THE PATH OF DUTY IS THE WAY TO GLORY."
On the other:

"H. P. PEET, CLARUM ET VENERABILE
NOMEN."

"AMICUS HUMANI GENERIS."

The venerable man to whom these inscriptions rendered just honor sat at the head of the table, showing in his erect bearing, dignified presence, and pleasant smile the beau-ideal of a patriarch. By his side sat another venerable man, Horatio H. Brinsmade, D.D., who was one of Dr. Peet's associates in the American Asylum forty-five years ago, and for many

years has been a respected minister of the Gospel.

Our amiable and accomplished hostess, at the other end of the table, had around her the younger part of the company, among whom were the grandchildren of Dr. Peet, and some of his grandnephews and nieces. In the middle seats were Dr. Peet's eldest and only surviving son, the present principal of the Institution, and his accomplished lady, to whom, and the other deaf-mutes and semi-mutes present, Professor Peet interpreted the speeches and papers read, with his swift and dextrous fingers. This feature of the entertainment was a striking illustration of the value of the manual alphabet, as a means of social enjoyment to the deaf.

Before each guest was a bill of fare, promising to the bodily appetite a succession of viands too numerous to specify, but all calculated to promote an esthetic and rational enjoyment of the material part of the feast.

These were duly discussed in their order, with a glass or two of pure and excellent cider—that wholesome native wine of the North.

Addresses were made and papers and letters read, which formed the more substantial portion of the intellectual feast, garnished by such pleasant remarks as, in a company of intelligent and ready-witted people, would naturally flow from the general hilarity in view of the occasion and the surroundings. The addresses and papers themselves, including the graceful and touching remarks of Dr. Peet, are herewith subjoined.

DR. PEET'S REMARKS.

"MY DEAR FRIENDS—Ten years ago this day there were assembled in this house, at the instance of my youngest son, a circle of relatives bearing my name, and a few intimate friends to tender their congratulations on the anniversary of my birth. Soon after this delightful meeting the arrows of disease flitted across my path in rapid succession, and removed six of that little company to that unseen land 'from whose bourne no traveler returns.' One of this number was the beloved wife of my bosom, with whom I had taken sweet counsel for twenty-seven years. On the catalogue which enrolls the names of other dear relatives, stars have been prefixed, almost keeping pace with the passing years.

"How populous, how vital is the grave!
Each moment has its sickle, and cuts down
The fairest bloom of sublunary bliss."

But the cloud which cast its dark shadow over my domestic horizon had its silver lining. These all died in faith which inspired the hope of brighter scenes above. Time with its lenient hand assuaged the bitterness of my grief, and the good providence of God introduced into my household an angel of mercy whose intelligence, skill, and affectionate devotion have most fully met all the necessities of my condition. To her are we indebted for this pleasant entertainment, 'this feast of reason and this flow of soul.' This new alliance has widened the circle of friends which greatly enhances our social pleasures. Most of those of early youth and mature manhood are gone, yet I am happy to welcome to this festive board the representatives of former families, whose golden links are broken as well as those of more recent friendships, all of whom, by their presence here to-day, unite to honor the occasion and tender to me the respect and courtesy so grateful to an aged man.

"Other changes than those briefly alluded to have taken place within the last decade. Af-

ter having served my generation for forty-six years, in efforts to teach (metaphorically) the deaf to hear and the dumb to speak, I retired from this post of duty and responsibility. On the evening of the day before I left college, in conversation with a class-mate I expressed my intention to live in such a manner that when I departed this life I should be missed. It is natural for men to desire the good opinion of others, to secure which they must deserve it. It does not become me here to speak of the results of my labors. How far I have fulfilled my original intention I leave it for others to judge. My life-work is done; the verdict will soon be rendered. May it be written, 'He loved his fellow-men.'

"The vacancy occasioned by my resignation has been filled by the appointment of my oldest and only surviving son, who has taken up the work where I left it, and who will, I trust, carry it on to that degree of perfection beyond which, on account of physical obstacles, philosophy can achieve no higher triumphs.

"One generation passes away and another generation cometh. There are little folks around this table, all of whom I recognize as my grandchildren, who, for the first time, have had the opportunity to participate in celebrating grandpa's birth-day. Many years ago the mother of a little boy led him to see General Washington, who kindly placed his hand upon the boy's head. This event was ever afterward remembered, and stimulated his ambition to become as great a man as General Washington. Your grandpa is now an old man. His hair is white. And though he is not a General Washington, and possibly no one of you may be a Washington Irving, it may be pleasant for you to remember, when you grow up, that you were present at the congratulatory dinner given to your grandpa on his seventy-eighth birth-day. If you can not be great, try to be good, which is far better.

"My dear friends, one and all, I bid you good cheer. It is meet we should rejoice and be glad of heart. In the journey of life which, to some of us, has been by no means a short one, we have had vicissitudes of cloud and sunshine, yet goodness and mercy have followed us hitherto. Let us, then, hope on, hope ever, each trusting in Him who will never forsake what is committed to His care, till the sun of this life shall set to rise in the eternal morning of the better life to come."

The annexed acrostical enigma, with a double solution, was made up with a pencil at the table:

1. A President of the United States whose life and office ended in April.
 2. A great river in South America.
 3. A flourishing town of Central New York.
 4. A Republican State.
 5. A country often mentioned in the Bible.
 6. A distinguished New England college.
 7. A celebrated English poet of the last century.
 8. The rock on which Christ promised to found his church.
 9. A grandson of Adam.
 10. An eminent prophet. [youth.
 11. One who knew the Scriptures from his
- The following letter from Mr. Hotchkiss, Mrs. Peet's eldest son, was then read :

BROOKLYN, Nov., 1871.

MY DEAR SIR—It occurs to me that a congratulatory dinner in commemoration of your birth-day would hardly be complete without a small literary feast. I, therefore, present you with a set of Geo. Eliot's books, in five volumes, who, perhaps (like the Egyptian sorcerer, with his single drop of ink for a mirror, revealing far-reaching visions of the past), has disclosed, with a few drops of ink at the end of her pen, more of real human life than almost any other author.

If a suitable time can be afforded during the service of dinner, or thereafter, I would suggest that you designate some person to read "The Dinner," at page 219 of "Adam Bede."

May continued health and happiness, with few clouds, attend your further pathway in life, and your sun go down only when nature's decay shall render the "rest" that awaits us all welcome. Truly and sincerely yours,

PHILO P. HOTCHKISS.

In compliance with the request contained in the foregoing letter, Prof. Cooke read, for the delectation of those who had ears to hear, the indicated passage of "Adam Bede."

Besides these books there were a number of well-chosen and elegantly bound volumes offered as testimonials of friendship and affection. These will not be mere ornaments of the center-table, but will, the donors trust, present passages worthy to engage the attention and beguile the cares of the studious and scholarly old man.

Those of our readers who saw Dr. Peet presiding so ably over the Conference of Principals in Washington city in 1868, or taking an active part in the Convention at Indianapolis last year, are aware that time has dealt lightly with him; and that though feeling the infirmities of age in impaired powers of locomotion, and a difficulty in using the manual alphabet, yet seated at his table in his parlor or at his desk, he is still a courteous host, a pleasant companion, a reliable friend, a safe counselor, and a prompt and accurate man of business as in his best days.

His rare physical and mental vigor give promise of several years yet of usefulness and happiness, ere the summons comes to rejoin those loved ones gone before, of whom he speaks so feelingly and touchingly in the address given above.

J. R. B.

CONJUGAL PSYCHOLOGY: ANOTHER INSTANCE.

"**L**AURA'S Experience," in the December number of the JOURNAL, is a good illustration of the influence of mind upon mind, as well as of the providence of the Lord, which enters into all the affairs of life.

There are doubtless many unwritten experiences in real life as remarkable as "Laura's," showing that kindred souls may be connected by mysterious influences while widely separated as to the body.

The following narrative, every word of which is literally true, except the names, is indeed "stranger than fiction."

One morning in the spring of 18—, Mr. Jones, a young minister, was sitting by an open drawer in a gloomy and desponding state of mind, looking over the papers of his young wife, who not long before had suddenly sickened and died. He was all alone

in the world, and the future looked dark, yet he felt resigned, and tried to feel hopeful. While rummaging among the papers, and carefully packing such as he wished to preserve, his attention was called to a half-written letter addressed to Miss Grace Goodrich, who lived in another State, and whom he had never met, though he had often heard his wife speak of her as one of her dearest friends. He picked it up and read till, in the midst of a sentence, the pen had been dropped, never more to be resumed.

A strange impression seemed to shoot through his mind, that the partly written letter was one of those little providential pivots on which the important interests of life sometimes seem to turn. But he endeavored to banish the thought as absurd, and in compliance with a request of his wife,

that all her friends should be notified of her death, he added a few lines to the letter and sent it to Miss Goodrich. But the letter, and the strange thought, awakened a desire to read some of Miss Goodrich's letters. And, on looking through the drawer, he found a carefully preserved package, labeled Miss G. G. On opening it, he found that it contained an occasional correspondence running through two or three years. The letters were all written in a neat hand, and contained thoughts and sentiments of rare beauty, indicating both a cultivated head and heart. They were not filled with the common-place gossip which usually enters so largely into the letters of friends, but were revelations of the interior thoughts and feelings of a pure and earnest soul. They seemed to open the heart, and to give an accurate knowledge of its qualities. And, strangely, every thought and every sentiment seemed to awaken a responsive one in his soul. They seemed counterparts of his own views and feelings. He felt as though the writer must be an old and dear friend, and for weeks he found himself taking up and re-reading the package of letters almost daily, for the pleasure they afforded.

And, notwithstanding the apparent absurdity of the whole thing, as time passed on, the image of the writer, though vague and shadowy, seemed almost constantly present with him, and he could not turn from it. He was several hundred miles from her, and there seemed to be no probability of their ever meeting. And he had no reason to suppose that she had any thought of him, or would care to form his acquaintance, even were they thrown together. Thus matters continued for some time, when an unexpected change came over Mr. Jones' plans. It seemed desirable for him to look out a new field of labor. He was soon invited to preach for a church in the same State, whose pastor had gone into the army, with the promise of a chaplain's commission. His arrangements were made, and he was about ready to enter upon his new field, when the former pastor, failing to get his commission, returned. So he had to look in some other direction. About this time he was invited to visit some churches in the State in which Miss Goodrich resided. He felt that this

was a providential call, and that the way would open for him to meet her, but saw not how the meeting would be brought about. In his journey he passed through the town in which she resided, but saw nothing of her, and felt that he had been very silly in letting one whom he had never seen, and probably never would see, have such a constant place in his thoughts. But, nevertheless, wherever he went, her image seemed still to follow him, and, regardless of his reasonings, became more sacred every day.

Thus time passed along for several weeks, when he came to a neighboring place to spend a couple of Sabbaths. And it is sufficient for the purpose of the present narrative to say that during this time he met her. The acquaintance was mutually pleasant, and in a few months they were formally engaged, and the following year they were married.

But the strangest part of the narrative is yet to come. After these two congenial souls met, and their lives blended in one, on reviewing the experiences of the past, Mr. Jones was surprised on learning that, from the reception of the unfinished letter, with his note appended, Miss Goodrich's feelings had been similar to his own. He was in her thoughts almost day and night. In her devotions, morning and evening, he had a constant place. She felt that by some mysterious influence their souls were linked; yet she knew not why she felt so. She had no reason, from any external source, to suppose that he had any thought of her, or that they would ever meet. She had reached her twenty-sixth year without seeing any man who had any influence toward awakening the tender passion. She had declined an offer of marriage when her dearest friends thought her foolish for so doing. She had resolved never to marry unless her ideal was realized, and she had little expectation of that. And now, why she should feel so about a distant stranger, was an enigma she could not solve, yet she could not free herself from the impression. Reason and common probabilities seemed powerless to dissipate the mysterious influence. Thus she went about her daily duties with a new impulse, and animated by sweet and confiding feelings. And when, by a peculiar chain

of events, ordered by an all-pervading Providence, they were brought together, without an anxious thought she placed her hand in his for a life walk; and for nearly a decade of years they have journeyed together, with

no change only an ever-increasing sense of oneness, and a deepening feeling of joy in each other, and of thankfulness for the kind Providence which caused their pathways to converge.

EPSILON.

"TO THE FRONT!"

[Here are stirring words, which should be read by the timid and irresolute, who are afraid of progress and improvement, and who do not believe the world moves.]

You "thought such aims were out of place;"
 "'Twere best to do as others do;"
 "To be advised;" "You ne'er had failed;"
 "I ought to rest content like you."
 Oh, base contentment, born of sloth!
 Oh, counsel of a craven soul!
 Better my loss than all your gain,
 My very failure than your goal!

What though I fail? Am I the first?
 Or am I shamed because I fail,
 That such a heart as yours should beat
 With triumph as you tell the tale?
 You fail—not you! I doubt it not.
 You never knew defeated pride.
 They well may win whose aims are base;
 They scarce can fail who ne'er have tried.

To pierce the hidden core of Truth,
 To find some footing which is sure,
 To wed high thought with loving words,
 And lead a life which shall endure
 When all these street-cries of the crowd
 Shall have left the ear for aye—
 Not such the hopes that crown your years,
 And lead you on from day to day.

You have no "taste" for deep pursuits,
 Nor any hope beyond the hour,
 Content to win some hodman's praise
 With poor conceits of shallow power;
 Toeing cheap wisdom, neatly dressed
 And gilded, to a gaping crowd;
 "Discerning" all things—not like those
 Who "wrap their meaning in a cloud."

Oh, pert in speech and small of heart,
 While half of it is filled with gall,
 The first to hear, to first to sting,
 And tell it when your betters fall.
 Thrice better were it now to die,
 While striving for the great and just,
 Than drag three lifetimes out like thine,
 And fatten on such poisoned dust!

But pass. I choose to die, or reach
 The forefront where the bravest bleed.
 Keep thou the rear, and leave to men
 Less greatly meek to take the lead.
 But spare them when they chance to fall;
 For, trust me, noblest souls are those
 Who, falling, rise, and strive anew,
 And mix in battle to the close.—*Good Words.*

JOSHUA WATSON, THE ZEALOUS CHURCHMAN.

THIS face bears the stamp of true nobility. Its calm dignity and beautiful repose attract at first sight. We are reminded, as we contemplate it, of some of the grand old characters of early American history, whose portraits have come down to us; for instance, Benjamin Church, Roger Williams, Jonathan Edwards, and of comparatively later times Benjamin West and Abbott Lawrence. Those of our readers who can readily turn to the faces of these distinguished men will, we think, readily perceive the similarity of physiognomical type which prevails among them.

Mr. Watson's strong moral development would have fitted him eminently for the church; but there was also associated with this moral development a clear, sharp intellect and a temperamental susceptibility which adapted him for any department of active business life. He was an executant, a man to

arrange and supervise; and in the numerous religious and charitable enterprises to which he gave attention he manifested that enthusiasm which is the natural result of the association of energetic business qualities with warm, moral, and religious convictions.

In the vivid sketch which follows it is shown how one can accomplish great good in the cause of Christianity and not wear the surplice. But are not all called to be ministers in some quality or degree?

The father of this eminent man, John Watson, was of the old yeoman or franklin class, born on a small estate which had been handed down from generation to generation. When a young man he was very anxious to enter the ministry, but his father would not entertain the proposition, consequently he received a moderate education only, and subsequently left the farm to go into the world. He traveled to

London, and there obtained a clerk's situation on a salary of ten pounds, or about fifty dollars, a year. At this, however, he did not remain long; and after passing through a few phases of business life he was finally established as a wine merchant. Joshua was the youngest of two sons; and while his brother was educated for clerical life, he was trained with the view to taking a share in his father's business. After a somewhat careful course of training, in his fifteenth year he entered his father's count-

some effort, in connection with a few others, for the improvement of the means of educating the poor. Prior to this effort there was no organization or systematic effort in this direction, and the result was the development of the National Society. The details of the scheme were mainly drawn up by Joshua Watson, and he was appointed the first treasurer. The amount of good which has been done by this society is incalculable. Thousands of the youth of the poorest classes have received from it the



ing-room. He was noted for the fidelity and assiduity with which he attended to the duties which belonged to his department, although a son of the proprietor. About 1810, after his father retired, he became a partner in a similar house in Mark Lane, London. Here he realized a considerable fortune, and retired from active business in 1814. He had always exhibited a deep interest in religious matters. His zeal for the cause of the church amounted to enthusiasm. Previous to 1800 he made

greater part of their education, both in things intellectual and moral. "This society has been the means," to use the words of the late Bishop Bloomfield, "of diffusing more and more, year after year, the blessings of civilization and religious truth throughout the land, and has done much to make education real and not visionary, intellectual not mechanical." Mr. Watson took great interest in the publication of the Family Bible by the Society for Promoting Christian Knowledge. The subjects for the

engravings were chiefly chosen by him, and he also had superintendence of the map department. Of this society he was elected treasurer in June, 1814, with the approval of the clergy at large. Through this important position he was led to take a leading interest in the Society for the Propagation of the Gospel, and he greatly contributed toward converting it from a mere ecclesiastical board into an energetic missionary society. He obtained a special grant of five thousand pounds (\$25,000) from the Government to aid the work of the society in India; and to this grant large contributions were added from different sources. But the heathen and suffering in distant lands did not absorb all his attention, he had too keen a sense of the great distress prevailing at home, and so took a very active part in relieving the poor in Shoreditch and Spitalfields. At the time when the Germans were suffering from the ravages made by Napoleon's armies, Watson was foremost in organizing means by which substantial sympathy was shown that distressed people. He was openly thanked by Queen Charlotte, on the occasion of her visit to London, for the interest he had shown her destitute countrymen. It may be interesting at this time, when the civilized world has been pouring in its contributions for the assistance of the many thousands who have suffered from the terrible conflagrations at Chicago, and in the great wooded regions of the Northwest, that the expenses of the distribution of the funds raised to relieve the necessities of the Germans were only one hundred pounds (\$500). The admirable manner in which the accounts of this enterprise were kept was a matter of surprise to all. The thanks of the General Committee were awarded him. The King of Prussia sent him a valuable ring, the King of Saxony some Dresden vases; the Patriotic Society of Hamburg contributed a gold medal and a diploma. In 1817 he laid the foundation of the church building of the society under the title of the Church-Room or Free Church Society. A special commission was issued in favor of this project by the Government, then under the premiership of Lord Liverpool. In 1819 the University of Oxford honored him with the degree of LL.D. This degree Mr. Watson declined at first, but when the Vice-Chancellor, seconded by several of the leading clergymen of London, personally urged him to accept what the University considered but a slight expression of its esteem, he yielded. It was on the 29th of June that he received the degree, together with Dr. Southey and other illus-

trious persons. Much time would be required for us to detail the different benevolent enterprises in which he bore a prominent part. His energy and business judgment seemed capable of meeting any emergency, of solving any difficulty, however intricate; and when, by reason of age and infirmity, he found it necessary to withdraw more and more from official relations, it was with the keenest regret that his resignation was received by his brother officers. In 1833, when efforts were made for alterations in the Book of Common Prayer, and no little excitement attended the development of the scheme, Mr. Watson looked upon it with a certain degree of suspicion, as he was afraid of irregularity and unauthorized proceedings. Anxious for some sort of sanction, expressed or implied, from the clergy, he urged the preparation of an address on the subject. It was drawn up, and signed by several thousand ministers. Mr. Watson himself drew up one in the interest of the laity, which was signed by no less than two hundred thousand heads of families. This powerful opposition to any change in "the richest legacy of our forefathers," as the Prayer Book was styled in Watson's address, was sufficient to suppress the movement. In 1831 his wife died. His domestic relations had always been of the happiest order, and this loss bound him with the deepest grief, but did not long deprive religion and morality of his valuable services. In 1837 his only daughter, who had been married but a short time, also died. This fresh blow changed the course of his life for the future. He wished to retire altogether from public life, but the remonstrances of the Archbishop and others prevailed.

However, he could not exhibit all the energy of his vigorous manhood, although his association in promoting different religious and humanitarian objects was still deemed invaluable. One of his last good works was actively urging the enlargement of the Clergy Orphan School, and the purchase of a site for the erection of a new building. Although subsequent to 1850 his health failed rapidly, he was enabled to complete the church of St. Barnabas, Homerton, and took part in its consecration. Slowly, but certainly, death approached him. In his last hour he was calm, collected, and gentle. Even then there was so much earnestness, fervor, and enthusiasm evinced in holy things that his niece said there seemed a glow as of health. He died early in the year 1855.

From this brief sketch it will be seen that

Joshua Watson in religious matters was no ordinary man. It can be said of him, if of any one, that he was a true and loyal son of the Church of England. He believed in its organization, in its tenets and spirit, without reference to the man who might wear the sacer-

dotal robe or exercise the episcopal office. Yet, with all his devotion to the cause of religion, he was a practical, energetic, executive business man, and delighted in exercising his superior capacity in this respect for the welfare of the church, and for carrying into effect its benevolent work.

"FOLLOW YOUR NOSE."

BY ALTON CHESWICKE.

HOW often do we hear this expression made use of by old and young! Yet, with the single exception of the man in the story, whose nose, being crooked, led him around the corner, and consequently out of his way, very little, if any, mention is made of the character or tendency of the nose which we are to follow, or the extent to which we are to follow it. A large nose, we are told, is the sign of a strongly-marked character; and if, as seems likely, the nose, as the most prominent feature, often indicates in its contour the most prominent characteristics of the mind, some people would seem to be "following their noses" with a vengeance in everything they undertake. Indeed, it would seem that a large and strongly-marked nose takes the lead not only of the rest of the features, but also of the mental faculties which find their representatives in these features, guiding them at its own sweet will in whatsoever direction it may incline. Unfortunately, too many of us are in the predicament of the man in the story before alluded to; and many are the corners we turn and devious the ways we tread while following in the lead of our erratic noses. But we shall doubtless illustrate our subject better by a brief account of the fortunes of three individuals, who shall serve us as examples of the case in point.

Three schoolboys setting out early in life, and each being the happy possessor of a nasal promontory of respectable size, seemed to have made up their minds, as their subsequent careers testified, to follow their respective noses on their way to fortune's shrine. Whether any one had been kind enough to bestow upon them this oft-conferred advice we know not, but certain it is that they acted upon it most persistently.

The first, who for convenience' sake I will

call Tom, was blessed with a nose which, when in a normal condition, though, unfortunately, this was not often the case, evinced a most unmistakable tendency to mold itself upon the model of an eagle's beak, and by the prominence of the sign of *attack* indicated the character of the possessor.

From his earliest years Tom's nose was always leading him into trouble. When a little fellow, acting from the faculty of self-defense, which was also largely developed, his quickness to resent in the fiercest manner the slightest provocation, no matter by whom offered, afforded a continual inducement to larger boys to obtain amusement out of him by arousing his "spunk," as they termed it; and many a thrashing did his too ready exhibition of said "spunk" obtain for him at the hands of merciless tormentors. But though often conquered, he was never subdued; his pugnacious nose, defiant as ever, seemed to court attack from all quarters; and so numerous and severe were the blows and thwacks that were continually descending upon that poor little organ, that it is a wonder that it retained its integrity of contour as long as it did.

Grown older, toughened, and strengthened by his many contests, the tables were speedily turned; and his pugnacious inclinations, acting now more directly through the sign of *attack*, he became himself the aggressor. His early experience had not been calculated to teach him the exercise of mercy, nor did he evince it himself, and he soon became a terror to all his associates. Such a nose as he had for scenting a quarrel! Not a broil or dispute of any kind could take place for miles around in which he was not speedily a participator, if not a principal. Like Job's war-horse, he literally "smelled the battle afar off," and was ever eager for the fray.

When still young in years, he was compelled to leave school to make his way in life thenceforth by his own efforts. His teacher, who liked the lad on account of some good qualities he possessed, took occasion to remonstrate with him about his quarrelsome disposition, warning him of the evil results which must inevitably follow the unrestrained indulgence of his ruling propensity. "That nose of yours, my boy," said he, in conclusion, "though a good one, will lead you into much sorrow and disaster if you follow it so persistently."

"I'll risk it, sir," replied Tom gaily, elated by the prospect of a hand-to-hand encounter with the great world at large, and fully confident that he should win for himself abundant laurels; "my nose has done me good service here—there's not a boy that can stand against me now—and I mean to follow it for the future. Can't have too much of a good thing, you know, sir;" and seizing his cap, he cut short all further "sermonizing" by making a speedy exit.

About twenty years later, chancing to meet an old school-mate of mine, I was reviewing past events with him, when it occurred to me to inquire about Tom, his fortunes and whereabouts, being matters well known to my friend; and from him I learned his subsequent career, which was varied and interesting enough, and fully confirmed the promise of his youth. With his usual headstrong persistence, he had, agreeably to his expressed intention, gone on following his nose into all manner of tribulations with, poor fellow, anything but a happy issue. After a strong and even perilous youth, during which he had succeeded in making a few friends and hosts of enemies, he embraced, successively, the professions of a lawyer, editor, and politician, in each of which his unfortunate nose proved a fatal bar to success; for having by long and constant practice become as expert in the belligerent use of his tongue and pen as he had formerly been with his fists, he in a short time alienated his few remaining friends, and increased greatly the rancor of his already bitter foes, drawing down upon his devoted head such a storm of indignant opposition and persecution as to quickly sweep him from his position, in spite of the most desperate resistance on his

part. It would require a more graphic pen than mine to do justice to this portion of his life, more especially to his experience as an editor. That it was sufficiently exciting, may be readily inferred from the premises; we leave it to the imagination of the reader to conceive the *richness* thereof.

Chagrined, disgusted with all the world but himself, and, for the first time in his life, almost on the verge of despair, our hero now set himself seriously to work to reckon up his gains from this stormy campaign, and was obliged to confess that though he had borne the brunt of every conflict, had performed a double share of labor, and had been made use of, as long as practicable, by others to further their own advantage, he had received little besides hard knocks as a recompense.

With his usual perverseness, however, laying the blame anywhere but where it belonged, viz., on his own incorrigible nose, or rather upon his too faithful following of the same, so far from mending his ways, he was about to give full scope to the lowest manifestation of his unruly propensity by embracing the "manly art" of a pugilist, when the breaking out of the civil war afforded him, for the first time, a legitimate field for the exercise of his martial tendencies. The first sound of the trumpet calling to arms was welcome to him as an invitation to a royal feast, and the brave and dashing soldier was soon on the high road to promotion. But, alas! even in war there are times when discretion is by far the better part of valor, and to our impetuous friend discretion was a thing unknown. So it happened that there came an evil day when our brave boys, having engaged with a greatly superior force of the enemy, and having held their position until it was evident that further resistance would only involve a useless waste of life, the order was reluctantly given to fall back. Our hero, who had risen to the rank of an officer, was rallying his men for a final charge, which he had determined on his part should be decisive, when the unwelcome note of the bugle fell upon his ear, sounding instant retreat. But if the ear was attentive, the nose was not. Gleaming out bold and defiant from the smoke-and-dust-begrimed features, with its tremendously developed sign of at-

tack, that was not a nose to retreat, or turn aside, or follow any road but that which led straight forward into the thickest of the fray. So, without an instant's hesitation, and with a rallying cry to his men, he, according to his usual custom, following the lead of this dauntless nose, charged with an air of fierce determination that for a moment struck terror into the breasts of his opponents and caused them to fall back a few paces. Eagerly following up his supposed advantage, and his movements not being observed by the rest of the troops, who were using their utmost endeavors to preserve an orderly retreat, he quickly found himself, with but a handful of men at his back, surrounded on all sides by the enemy, and cut off from all possibility of rescue. A rain of sword and bayonet thrusts put a speedy end to his desperate defense; and when, later, he recovered consciousness, it was to find himself a sorely wounded prisoner in the hands of the foe. The horrors of a military prison finished the work which the battle-field had begun, and when set free, it was as a broken-down, disabled man, scarcely able to support his exhausted body upon his shattered limbs.

After this information, as may be supposed, I lost no time in visiting this poor victim of a mistaken policy. So sadly changed had he become, that I could scarcely believe, even upon the most conclusive evidence, that this prematurely decayed and shattered wreck was identical with the bold, stalwart youth of my school days, with whom I had had many a trial of strength, always accompanied by disaster and defeat. He bore the unmistakable signs of many a sharp contest, while so worn and battered had he become through his rugged experience, that though but thirty-five years of age he looked like a man of fifty. It was but too evident that, as far as physical possibilities went, his fighting days were over, while his earthly life was fast drawing to a close. Dependent entirely upon his pension—and too many of our poor discharged soldiers know what that means—gaunt poverty continually stared him in the face, and having defied the whole world in his prosperity, he was abandoned by the whole world in his adversity. His unhappy nose had indeed led him into anything but "pleasant places."

But it had not escaped its share in the general misfortune, as its irregular and disfigured contour testified. Poor fellow! the glory of his countenance had departed.

I found him brooding over his wrongs and misfortunes, and as sullen as a caged lion, full of indignation and hatred toward his late companions in arms, who, he maintained, with characteristic obstinacy, had basely deserted him in his extremity, and had been the cause of all his subsequent distress. Disappointment and disaster, far from subduing, had but embittered his spirit and intensified his quarrelsome propensity; and with, apparently, not a friend in the world, he still retained the ability to make for himself fresh enemies; and though physically almost helpless, still walked, in his way, a perfect Ishmaelite among men, respected by none—dreaded and detested by all.

He seemed, at first, disposed to resent my intrusion; but when he recognized an old school-mate he became more cordial, and readily conversed about old times, and aided with much zest in recalling long-forgotten reminiscences. But the topics to which he reverted the oftenest, and upon which he dwelt with the liveliest interest, were the recollections of his own prowess; and it seemed as if he would never weary in "fighting o'er again" his many battles. He gave me some additional particulars of his subsequent life, and ended by expressing the settled determination to be even yet with all who had done him wrong.

In view of the already sad consequences of such a course, this resolution excited in my mind the most ominous apprehensions for his future, and the deepest sorrow that he should be so misguided. I therefore mildly endeavored to show him his mistake, to indicate where the blame really lay, and, from his present forlorn condition, which was undeniably the result of his previous line of action, to draw arguments whereby to induce him to adopt a more conciliatory course in future. But ere I had uttered many words to this effect, the keen eye, kindling with no kindly light, gave me hint of breakers ahead; and upon my attempting to continue, the incorrigible nose, true to its nature, gave out such an unmistakable note of warning, that perceiving how utterly futile would be my

efforts in this direction, I was glad to avert the impending storm by changing the subject as quickly as possible, and withdrawing soon after from the still irate presence.

The second of the three school-fellows, Harry by name, rejoiced in a nose whose extremity turned as decidedly *up* as Tom's had turned emphatically *down*. He also, as I have intimated, seemed to have resolved to follow the lead of the chief ornament of his countenance. Not in the least did he resemble his valiant school-fellow; their noses were not more dissimilar than their characters.

The only real fault that Harry could be said to possess was a most inordinate curiosity. No individual of the genus *Sus* was ever more persistent in turning up the ground for roots and acorns than was Harry in leaving no stone unturned whereby he might gain possession of a secret. The closer it was kept the greater the charm it had for him, and the more importunate and pertinacious he was in his efforts to obtain it. Added to this was a simplicity of mind and an easy good-nature which, in this case, might almost be denominated another fault, and which rendered it impossible for him to keep any secret that might be intrusted to him. Though profuse in his promises of strict secrecy, and sincere in his efforts to maintain it, the secret, whatever it might be, whether affecting himself or others, was sure to escape him in some way; and the tact and cunning by which he often succeeded in worming himself into the confidence of others never seemed to stand him in good stead to preserve his own. Utterly indifferent to the acquisition of useful knowledge, his curiosity seemed to crave only forbidden things, and consequently, though good-tempered and obliging, he was regarded as the pest of the whole school.

A group of boys could not assemble to converse upon the most trifling matter but his quick eye would detect them; his insatiable nose would scent a secret, and he would make a bee-line for them forthwith, when he would begin questioning, teasing, and worrying to be taken into their confidence, until roughly and sternly told to go about his business. A rude repulse never

failed to make him retreat a short distance; but threats, and even blows, could not induce him to go beyond ear-shot when once he was convinced that there was something in the wind.

Failing in the first attempt to elicit the desired information, he would, with a pertinacity as remarkable as it was annoying, dog the possessors of it, singly or together, for days or even weeks, if necessary; or, fastening himself upon the most good-natured, would never lose sight of him until by ceaseless importunities, either by words, looks, or gestures—for he was master of all three modes of questioning—he had fairly worried him into revealing what he wished to know, under promise of most profound secrecy. Once possessed of the much-coveted secret, he would plume himself upon it so openly and ostentatiously as speedily to attract the attention of other boys who, knowing his weakness, would beset him on all sides, and with very little difficulty draw from him all that it had cost him so much labor to gain, thus causing him to incur, again and again, the indignation of those who had confided in him.

But their indignation was not all that he had to endure. The boys laid many plans to revenge themselves through the very propensity that so annoyed them. At one time a number would get together and converse in loud and excited whispers, or exchange significant glances, until they had attracted his attention and excited his curiosity to the highest pitch, when, with many precautions and much ceremony, they would confide to his greedy ear the details of some tremendous scheme which they pretended to have concocted, or some wonderful discovery which they had made; and when, as invariably happened, while swelling with importance with the possession of such a mighty secret, he had been induced to disclose it to all the rest, the authors of the plot would probably proclaim the whole thing a hoax, and thus cause him to become the laughing-stock of the school. As he was sensitive to ridicule, this was usually more effective than anything else in checking his propensity, but only for a short time. Or a boy would pretend to have found or heard of something extraordinary; and by continually promising Harry to tell or

show him "in a minute," or "as soon as we find a nice, quiet place where nobody else can hear," taking good care meanwhile that the minute should not arrive, or the place be found, would keep him following at his heels, like a dog after a bone, in a perfect fever of impatience and expectation, until he had fairly tired him out, when he would turn upon him, and in a tone that carried conviction, coolly inform him that he had nothing for him to hear or see. Frequently, too, the boys would challenge Harry to a race, though he hated running, being naturally slow of foot and short of breath, promising to tell him something splendid if he should succeed in catching one of them; and many a weary chase has his silly little nose led its silly little possessor after what proved to be naught.

It was some time after he left school ere we saw the last of him, and right glad we were to part company, although we felt disposed in a friendly way toward him, yet his propensity to make other people's business his own, and his ceaseless prying and questioning—he had attached himself upon some pretext to our place of business, where he seemed likely to remain a fixture—were very burdensome, and we were heartily rejoiced when a favorable opening for him in a distant city relieved me of an infliction that was fast becoming intolerable.

Passing through the streets of New York one very cold winter's day about ten years later, I suddenly encountered a thinly clad, miserable-looking specimen of humanity who, with outstretched hand, seemed endeavoring to stop me. I supposed that he was soliciting alms, but there were already too many such wretched beings abroad in this inclement weather, and I had already disposed of all my loose change. So, with an involuntary tribute of pity, I was about to pass him by without further notice, when the sound of my name, uttered in a voice that sounded strangely familiar, arrested and fixed my attention. I turned, and each regarded the other in silence for a few moments; but though I scanned the features attentively, I failed to recognize them; and, thinking that I must have been mistaken, I was about to resume my road, when, extending his hand, the stranger exclaimed, "So you don't know

me, eh, old fellow? and it is not so very long ago, either, that we parted!"

Guided by the voice I looked again; and—yes, I should have known that ~~now~~ among a thousand. Though altered in all else, by the aid of that important feature, which still remained unchanged, I recognized my quondam school-fellow Paul Pry, *alias* Harry L—. The torrent of interrogations with which I was overwhelmed when once he became aware of my recognition of him, proved that in essentials my friend was much the same.

His sad story was soon told. Having followed his nose into everybody else's business, his own had been neglected, and while poor Tom had gained the hatred of all the world, Harry, still more unfortunate, had incurred not only its hatred, but the additional burden of its contempt. He was soon, therefore, turned adrift from all connections and left to shift for himself, and though he had been so zealous in making himself acquainted with the fortunes and interests of others, no one troubled himself to learn how *he* fared, and he was speedily reduced to the lowest extremity, and was even now, through neglect and deprivation, in an almost dying condition.

I lost no time in making him as comfortable as my means and his now hopeless condition would permit, but it was with difficulty that I could procure any one to administer to his most necessary wants, so unwilling did all seem to have aught to do with one so well known and so generally despised. His ruling passion, far from diminishing, seemed rather to increase as his strength declined; and so wearisome did it become, that our visits to him, much as we pitied him, became necessarily brief.

The last good office which his nose performed for him was to hasten his death; for one very cold day, shortly after we had met and provided for him, his nurse having quitted the room for awhile to get rid of his ceaseless questioning, and his fire having been suffered to go out by neglect, it (the nose) took him from his bed, across the floor, and to the window, which it induced him to open to learn the cause of a slight disturbance in the street. The cold, sharp draught aggravated his malady, and he rapidly sank under it.

Perhaps the "homeliest" nose in the whole school was that which adorned the countenance of Richard M——. The end of this feature seemed to be painfully undecided as to which way to turn, whether upward, downward, or sideway, and at the time when we first made Dick's acquaintance, it looked as if it had tried each of these directions in succession, and had abandoned all of them in despair. Indeed, it was a commonly received tradition among the boys, that Master Dick had had his nose well wrung at some time for some act of *mean-ness*, for which amiable quality he was famous, and that it had ever since retained the twist. Upon this was founded the appellation of "Twisty," by which he was universally known.

The only thing decided in this nose was its development laterally, just over the place where physiognomists locate the sign of Acquisitiveness, and which was, indeed, excessive in one so young. It was well known among the boys, that in driving a bargain, whether for tops, marbles, or penknives,—which he was continually urging them to do,—it was impossible for any one to get the advantage of him, and that in nearly every case they would be most woefully cheated. It was understood, also, that if any article of property were missing anywhere in his vicinity, it must be resigned as irrecoverably lost; for he was an adroit and nimble thief, and as cunning and skillful as a magpie in hiding things away; while such a thing as voluntary restoration of anything that he had once laid hands on had never been known of him.

Directly upon leaving school he entered the service of a merchant, with whom he remained some time; but his unlucky nose, finding its way to the till once too often, he was detected and ignominiously dismissed, only escaping the full penalty of the law through the influence of his parents. Nothing daunted, he repaired to a distant city, where he set up in business for himself on a small scale; and taking timely warning by his past experience, he, while indulging in every species of rascality that promised to be profitable, took good care to avoid all open conflict with the law.

It would be treading too much in the mire

to attempt to trace all the dark and devious ways through which he followed his avaricious nose for the next ten years. Meeting him in the street once during that period, we were astonished to see the rapidity with which his conduct was revealing itself in his features. His nose, having arrived at a conclusion in regard to the perplexing matter of direction, had assumed a decided and disagreeable downward droop, suggestive of the direction in which all his thoughts and aspirations were bent, and seemed to promise eventually to bring him down bodily (as it afterward did) to mingle with the dross he was so eagerly heaping up for himself. His complexion was rapidly assuming a yellowish tinge, while premature old age was following hard upon his footsteps. But when did avarice ever cry "enough?" That nose, ever accustomed to pursue its own route without let or hindrance, could not long brook even the most superficial restraints of the law, and it soon led its obedient follower into such depths and excesses of villainy, that exposure and consequent punishment became inevitable. Once more he was compelled to fly, at the sacrifice of much of his ill-gotten gains, and nothing more was heard of him, save the rumor that he had joined a band of counterfeiters.

Some three years since I found myself, one evening, through a combination of circumstances that it is unnecessary to enumerate, the sole occupant of a little room in a large vacant house in a lonely neighborhood, keeping guard over a chest of valuables left in my care till morning. Not entirely alone, however, for in the adjoining chamber were sleeping three stout men, well armed, who only waited a signal from me to rise and give a warm reception to the nocturnal visitors whom we were hourly expecting. I had extinguished the light, and as I sat there listening to the monotonous ticking of the clock upon the mantel, no sign of any conscious life within could have been discerned from the exterior of the dwelling.

Slowly the time wore on; the oppressive stillness being broken only by the clock telling the hours of eleven, twelve, and one. Just as this last stroke had ceased vibrating, the sounds for which we had been waiting fell upon my ear; and, arousing my com-

panions, we awaited the issue. I will not attempt to describe the struggle which followed, and which was conducted in almost total darkness; but when it was over and I again struck a light, I was alone in the chamber with the body of a man lying motionless across the threshold. I approached him, and, struck by something familiar in the bloodstained countenance, I bent down, and passing my handkerchief gently over the distorted features, I recognized them the next instant as those of Richard M——.

As I stood gazing in stupefied horror at the once familiar countenance, I heard two of my companions stumbling through the darkness on their way back to the room where they had left me. "Confound it! which way do we go now?" said one of them, as he stopped bewildered in the passage.

"Follow your nose, you fool," said the other impatiently; "don't you see the light shining right ahead of you?"

"Look here," I exclaimed, as they approached, "do you see that man?" And as they paused abruptly and gazed upon him in silent awe, I continued, "*He* followed his nose all his life, and this is what it has brought him to."

The men regarded me with a bewildered stare, and I proceeded to elucidate. "Observe," said I, "the breadth of that nose just above the wing; there's where the mischief lies. The excessive Acquisitiveness, of which that is the sign, has been the cause of his misspent life and tragic end. Following a nose like that, what could be expected but that it would bring him to ruin at last?"

"Well," said one of the men slowly, after ruminating a few moments, "if it was his frenology as ailed him, he couldn't help it, I suppose, and I don't see how he was to blame."

"The trouble was," said I, with difficulty repressing a smile, "not that he possessed such a nose, which in itself was not so bad a nose, but that he made no effort to control it, but let it lead him whithersoever it would. If in early youth——"

I was interrupted at this juncture by the return of the third of my assistants, and the conversation thereupon taking a different turn, I was prevented from continuing my remarks. What, therefore, I intended to say

to two or three at the most, I will now endeavor to say to the public at large through the medium of a journal devoted to the consideration of such topics.

Having selected the three most prominent and clearly defined types of nose that obtain with Tom, Dick, and Harry in the world at large, I have endeavored to indicate some of the evils which arise from following either. But even though they do us such despite, and lead us so readily into mischief, it is scarcely worth while to adopt the suggestion of Aaron to Moses in the nursery rhyme, and "cut off our noses," either literally or figuratively, however much they may offend us. Not only because, as Moses very sensibly replies to Aaron in the same rhyme, "'tis the fashion to wear 'em," but because the desired end (we do not mean that of the nose) would be as far from being realized as ever. Moreover, the very qualities which are at present the cause of our misfortune may, if properly managed, be made to conduce greatly to our advantage. Combativeness, Inquisitiveness, and Acquisitiveness have each their place to occupy and their work to perform; nor can we dispense with any of them; and the stronger the propensity the more valuable it is, if properly balanced and rightly applied.

A large nose, then, like a steam-engine, is a good thing to have before us; but also, like a steam-engine, requires the careful guidance of a skillful engineer; and to secure a safe journey, and a happy ending thereto, it must be propelled upon the well-graded track whose course has been surveyed, and whose bounds have been set by Reason and Moderation. Once let it swerve from this track, and whatever its shape or tendency, it will speedily carry the train behind it, however well freighted with good things, over the downward grade to hopeless ruin.

Look well, then, to the *ruling* propensity, especially in early youth. "Follow your nose" only as a skillful driver "follows" a well-trained horse. While following him physically, he precedes him mentally; and while seeming to be borne hither and thither at the will of the creature before him, he holds the reins in a firm grasp, and through them controls and determines every movement.

Department of Physiology—Our Sanitarium.

The truths of Physiology should be inculcated and enforced early and earnestly, and with the emphasis of high religious duty.—YOUNG.

RHEUMATISM.

BY R. T. TRALL, M.D.

RHEUMATIC affections, with the exception of simple fevers, are among the most frequent and most tormenting of human ailments, and no diseases can be named respecting whose essential nature physicians have more discordant theories, or more various and even opposite methods of treatment.

The medical profession have tried the *antiphlogistic* treatment—bleeding, salts, starvation; the *stimulating* treatment—alcohol, mustard, generous diet; the *alterative* treatment—mercury, opium, antimony; the *acid* treatment—lemon-juice, vinegar, cranberries; the *alkaline* treatment—bi-carbonate of soda, iodide of potassium, lime; and the *symptomatic* treatment, which means medicating the symptoms on their own merits or demerits, without much reference to form, type, or diathesis. The best or worst of these plans is still a matter of controversy.

No disease known to medical men is so liable to be followed by structural derangements, distortions, paralysis, and permanent disability as are the various kinds of *acute* rheumatism. But, whether these effects are the results of medication, or the natural tendency and sequelæ of the disease itself, may be a question having two sides. Certain it is, however, that no case has been yet recorded in which any deformity or permanent injury happened when the patient was treated from first to last hygienically or hydropathically.

Again, under the ordinary treatment, as is well known, *metastases*, sudden, dangerous, and sometimes fatal, frequently occur. The symptoms disappear from the joints, and the heart, head, stomach, or lungs become affected. But in no case yet recorded during thirty years of hydropathic treatment, comprising hundreds of good and bad cases, treated by scores of good and bad hydropaths, under good and bad circumstances, at many better and worse institutions, has there been any "retrocession" to the vital organs, when no medicine had been employed.

When the story went abroad from Graefenberg that the bold peasant (who had never read a medical book), Priessnitz, was treating

and curing all forms of gout and rheumatism by application of *cold* water to the whole surface—packs, plunges, douches; that he applied still *colder* water to the inflamed joints—umschlags, compresses; and that he even gave the patient the *coldest* kind of water to drink, the practice was so contrary to the established opinions of the medical profession that a *cold* chill pervaded their entire pathology, and they very naturally cried out against it as liable to drive the disease in and produce organic disease of the heart. But no such result has ever occurred, notwithstanding there has been much rash and bungling management of the water-cure processes.

What is rheumatism? Simply, inflammation of the structures and tissues of and around the larger joints. But why, it may be asked, does inflammation of the joints differ in so many ways from inflammation of other parts—the viscera, for example? Because their structure is different. The impurities which lodge in and obstruct the denser structures of the joints can be carried through the more soft and porous structures of other parts.

When the joints are but slightly inflamed, the affection is called *chronic rheumatism*. This is unattended with fever. If the joints are more severely affected, with slight feverishness, the term *subacute rheumatism* is employed. When the fever is violent and the joints greatly swollen and very painful, the phrases *acute rheumatism*, *articular rheumatism*, and *rheumatic fever* are indiscriminately used; and when the whole surface is swollen and painful, with a correspondingly less degree of inflammation in the joints, the term *inflammatory rheumatism* is applied. The technology is exceedingly awkward, and rendered still more complicated to the non-professional reader from the fact that medical men, who are careless in their nomenclature, employ these phrases interchangeably and loosely.

The immediate cause of all rheumatic affections is the lodgment of particles of foreign matter in the dense structures of the joints. These may be earthy, mineral, saline, or alkaline. Lime and ammonia are common bases

of saline and alkaline matter which accumulate in and around the joints. In old gouty subjects these concretions form protuberances or "rings" around the joints of the fingers and toes. In some cases ulceration takes place and the part discharges carbonate of lime and other earthy ingredients.

All substances of a saline or earthy nature, which are not digestible and assimilable, tend to the formation of rheumatic and gouty obstructions; and when accumulated to the extent of seriously interrupting the circulation, the vital powers make a special effort to expel them. *This remedial effort is rheumatism.*

Where the obstruction happens to be greatest, the blood accumulates, and the part is red, hot, swollen, and painful. *This is inflammation;* hence all rheumatism is inflammatory. If the accumulation is great, and one or more large joints or several small ones are affected simultaneously, the whole system will be so disturbed that fever will co-exist; hence the term *rheumatic fever*, meaning a local inflammation of the joints and a constitutional febrile disturbance.

Such being the nature of all rheumatic affections, the proper treatment—and that which has been invariably and promptly successful in the hands of all hygienic physicians, so far as I know—is not difficult to indicate.

The first attention should be given to the fever when that exists, for it is a rule that should never be forgotten by hygienists, that general treatment is always more important than local, in febrile diseases of all kinds. The fever should be managed according to the degree of heat; and the greater the heat of the surface the more frequently should it be bathed with tepid or cool water. The inflamed joints should be wrapped in cold, wet cloths covered with dry ones, and renewed as often as they become warmer than the normal temperature. They should be continued until the heat and swelling are permanently abated. The diet must be simple and abstemious, and when the fever is violent, no food should be taken, except a little gruel and baked apple, or something equivalent, once or twice a day, until the paroxysms subside. The bowels require no attention, save an enema or two of simple water.

With this simple yet effective treatment, ordinary rheumatic fevers are ended within a week; extreme cases rarely continue beyond two weeks. But under the ordinary drug treatment the patient frequently suffers for months or years, and often becomes a cripple

for life at last. Chronic rheumatism, of course, requires a longer course of medication—usually one to three months. In this case diet, and exercise, and the whole hygienic regimen should be attended to.

PICKLES.

"ARE not pickles good? I always thought they were healthful. What about salads? Are they not good?"

These questions are frequently propounded to us, and our uniform answer is, that pickles, salads, greens, and all the trash which requires vinegar to make it palatable, are eaten solely for the vinegar; and as vinegar is a product of decay, and an acid entirely too strong to be wholesome, it should be avoided altogether. People who most crave vinegar are those who eat sugar and fatty matter in excess. Fruit acids are supplied by nature in abundance, and are well adapted to furnish the system with all the acid it requires, and that of the right kind.

Vinegar will eat up bones; it will injure the teeth and the coats of the stomach; it will injure the blood; it will break down the health. A fat, young lady who was told that the use of vinegar would reduce her flesh, entered upon the improvement with such earnestness that she took half a teacupful several times a day. Her fine health soon became greatly damaged; she not only lost her surplus fat, but her natural flesh as well, and was reduced to a skinny skeleton. From being ten pounds heavier than she thought was becoming, she became thirty pounds too light. She did not eat any more vinegar, but the life-long repentance of her folly did not bring back the requisite plumpness of form.

"But good cider vinegar being the juice of fruit ought not to be injurious," says one. The juice of fruit, when it is natural, just taken from the fruit, will not injure a person, unless too much is taken. Most of us know the effect of drinking sweet cider in excess. Nature takes care to keep no more of it in the system than is needful. But vinegar has undergone the fermenting process, which is the first stage of decay, and has now become relatively poisonous. All it needs now is concentrating, like the poisonous acids, to make it eat the living tissues. Our firm conviction is, that if on every table there could be raw or cooked fruit of various kinds in ample abundance at every meal, ninety-nine men in a hundred, in a year's time, would learn to take enough of

the fruit to supply the system with its requisite acids, so that neither pickle nor salad, with vinegar, or vinegar in any form, would be desired. Let vinegar be repudiated, and fruit be established in its place, and the dentist and doctor will have far less to do, and the undertaker's work will be much longer postponed.

APPEAL FOR POOR CHILDREN OF NEW YORK.

THE bitter cold of winter and the freezing storms have come upon thousands of the poor children of this city unprepared. They are sleeping in boxes, or skulking in doorways, or shivering in cellars without proper clothing or shoes, and but half fed. Many come barefooted through the snow to our industrial schools. Children have been known to fall fainting on the floor of these schools through want of food. Hundreds enter our lodging-houses every night who have no home. Hundreds, who are ragged, half starved, and utterly unbefriended, apply to our office for a place in the country. Will our friends throughout the city and country help us to help these unfortunate little ones?

Fifty dollars will give to three of these children a home in the West, where they are wanted. Who will thus make a present of a home? Who will help us to put shoes on hundreds of bare feet, to clothe hundreds of half-clad boys and girls?

The Children's Aid Society is temporarily bereft of means through the frauds in the City Government. We ask of our friends in every part of the country to help us through this season, when the demands upon us are greatest.

Gifts of provisions and clothing may be sent to the central office, 19 East Fourth Street, New York, or will be called for, if the address be forwarded. Donations of money may be inclosed to either of the undersigned. If they are in checks or post-office orders, they can be made payable to the order of J. E. Williams, Treasurer; Wm. A. Booth, President, 100 Wall Street, N. Y.; J. E. Williams, Treasurer, Metropolitan National Bank, 108 Broadway, N. Y.; C. L. Brace, Secretary, 19 East Fourth Street, N. Y.

WORK OF THE PAST YEAR.

There were during the past year in our five lodging-houses, 11,928 different boys and girls; 157,729 meals and 181,578 lodgings were supplied. In the nineteen day and eleven evening

industrial schools were 9,429 children, who were taught, and partly fed and clothed; 3,386 were sent to good homes, mainly in the West. Total number under charge of the Society during the year, 24,743. There have been 4,958 orphans in the lodging-houses, and 1,281 orphans were provided with homes.

INDUSTRIAL SCHOOLS—OPEN TO ALL CHILDREN WHO CAN NOT ATTEND THE PUBLIC SCHOOLS.—Cottage Place School, 204 Bleecker Street; East River School, 206 East Fortieth Street; Hudson River School, 350 West Twenty-seventh Street; Avenue B School, 607 East Fourteenth Street; German School, 272 Second Street; Italian School, 44 Franklin Street; Lord School, 207 Greenwich Street; Park School, Sixty-eighth Street, near Broadway; Fifty-second Street School, Fifty-second Street, near Eleventh Avenue; Fifty-third Street School, 340 West Fifty-third Street; Phelps School, 335 East Thirty-fifth Street; Newsboys' School, 49 Park Place; Girls' School, 120 West Sixteenth Street; Fourth Ward School, 52 Market Street; Fifth Ward School, 141 Hudson Street; Eighth Ward School, 185 Spring Street; Eleventh Ward School, 709 East Eleventh Street; Thirteenth Ward School, 327 Rivington Street; Fourteenth Ward School, 93 Crosby Street; Sixteenth Ward School, 211 West Eighteenth Street.

FREE READING-ROOMS.—211 West Eighteenth Street, 204 Bleecker Street, 327 Rivington Street, 207 Greenwich Street.

LODGING-HOUSES.—Newsboys', 49 Park Place; Girls', 27 St. Mark's Place; Rivington Street, 327 Rivington Street; Eleventh Ward, 709 East Eleventh Street; Sixteenth Ward, 211 West Eighteenth Street.

P. S.—It would be a great favor to us if our friends would lay this appeal before any Sunday-school or church with which they may be connected.

[We heartily indorse this appeal, *knowing* the great and good work which the Society has been engaged in for so many years, and still is doing for the rising generation. The hope of our country, the perpetuity of our free institutions, lie in the *intelligence* and *integrity* of our people. Good citizenship depends on these conditions, and to the education and training of our youth we must look for them. Shall we not, each of us, do all we can for objects so patriotic, so benevolent, so godly? Let our hearts speak through our pockets, and help the needy and the State, the nation and the world, at the same time.]



NEW YORK,
FEBRUARY, 1872.

GREAT CRIMINALS.

TRAITORS to sacred trusts, conspirators against the public weal, corrupt judges, politicians who pervert voters and tamper with the ballot to prevent honest elections, and thus attempt to undermine our public institutions, are great criminals, and deserve universal execration, and close confinement within the walls of a prison during their natural lives; or should they not be treated as Ananias and Sapphira of old were treated? If capital punishment is justifiable in any case, it certainly is in the cases we have named.

The common liar, the sneak thief, the robber of orchards and poultry houses, and the pickpocket are all despicably mean and bad. All such should be shut up within strong walls, put to hard labor, fed on bread and water until thoroughly subdued and rendered penitent; and after having made full restitution by repairing all damages, by restoring what was stolen, or its value, besides paying the costs of trial and the expenses incurred by the State for their punishment, they should be released, if it shall appear that they have become reformed and are capable of self-regulation.

A great criminal must have greater capability than the petty thief. He will, as a rule, be found to have a larger brain and a larger body than the sneak thief or pickpocket. He must have an intel-

lect to plan, contrive, and carry out; he must be something of a general to organize, direct, and use smaller minds in his own interest. Those who rob cities, States, banks, and other corporations on a large scale; those who steal railroads and buy up weak and wicked legislators, have both bellies and brains. They are usually low and coarse in temperament, and lacking all of the finer sensibilities common to high culture and moral sentiment. They are dead to shame, and flaunt their selfishness, their coarseness, and their disregard for public opinion in the faces of honest folks. They are, indeed, like Ruloff, hardened wretches, thoroughly perverted, and defiant of God, man, or devil.

But how comes it about that such low, coarse, gross libertines and robbers are permitted to get into places of honor and of trust? The answer is very simple: "That which is everybody's business is nobody's business." That is to say, the management of public affairs, the election to offices of trust, are left by honest citizens to managing, peddling, pot-house politicians; and, consequently, bad men are worked into important places which only the *very best* are fitted to fill. A weak, goodly sort of a shallow man becomes a tool of the strong, and so great crimes, through him, are committed.

Were not religious men so divided and so cut up by sectarian creeds; were they not so jealous of their neighbors; and could they combine on good measures and on good men, they could at once overthrow corruptionists and appoint good men in their places. But many are so afraid of "politics in the pulpit," that rather than interfere in "*secular* affairs," they stand still and see the great social fabric undermined or honey-combed, and the community demoralized by wicked, godless men.

Our common schools are interfered with; public moneys are appropriated

to sectarian and private purposes; and our free institutions endangered, while good men look on and deplore, without feeling at liberty to speak out, denounce, and *stop* the wrong.

But, thank God! honesty is superior to dishonesty. Right will finally triumph over wrong. The intellect and moral sense of man shall hold the propensities in subjection. Satan and sin shall be overcome, and righteousness shall rule the world.

But if we would preserve our liberties we must be vigilant. We may trust

in God, but we *must* "keep our powder dry." By aid of the pen, the tongue, the press, and the pulpit, the world is to be civilized, Christianized, reformed, improved, developed, and elevated to an even higher plane than has yet been sought by politician, sage, or philosopher, and PHRENOLOGY will show how. When this SCIENCE shall be fully understood, and its principles practically applied, we shall "put the right man in the right place," and all criminals, great and small, will be placed where they will be impotent for further mischief.

PLAIN PENMANSHIP.

WE have often discoursed on the indication of character in one's HANDWRITING. It is a fact that, whatever have been our teachings in penmanship, whatever style we may finally adopt, we, like the painter or the preacher, put *ourselves* into our writings, pictures, and sermons. A dandy, or a Miss McFlimsey, will try to "show off" in his or her penmanship, so that the reader may admire flourishes, rather than be moved by thoughts or impressed by an exhibition of practical common sense. Flourishing with the pen may be well enough when learning to write, simply for practice, and to get the "hang of the thing," and to acquire facility, but when this shall have been attained, one should come right down to the simplest and plainest style possible.

When printers make books, they seek that kind of type which is plainest to read. It would be the height of folly to print anything so obscurely as to be *difficult* to read. It should be the same in writing. There are other ways in which to "show off," which are less obnoxious to good sense, and we beg to be excused from reading stilted, ornamental, or displayed penmanship. Here are pertinent remarks on the subject from *Hearth and Home*, which we commend to young writers: "From the great diversity of styles one sees in the matter of handwriting, it would seem that a variety of ends are sought in learning to write. A peep into an editor's

satchel of manuscript shows almost as many systems of penmanship as there are writers represented there. The dainty miss who forms her letters at acute angles, with the sharpest of possible pens and the lightest conceivable touch, appears to think economy in the matter of ink the one desideratum; while the blue-cravatted fellow (he certainly wears a blue cravat) makes his up-strokes finer than the hairs of his upper lip, in order, probably, to reserve strength for the heavy shading of the downward lines and the formation of the ten thousand flourishes in which his heart rejoices.

"The truth is, that not one man in ten, and not one woman in ten thousand, writes a really sensible hand, and the evil arises mainly from two facts—the first, that as a rule teachers of penmanship have no idea what good penmanship is; and the second, that nearly everybody mistakes the true ends to be sought in learning to write. Most people labor to make their writing pretty, thinking beauty an essential, or at least a very desirable characteristic of good penmanship. Now, the truth is, that a pretty handwriting is always a difficult one to write, and nearly always a hard one to read. Pretty hands are in direct violation of the two chief principles of penmanship, which are the only rules of the art founded in good sense. Men write that others may read, not that they may admire the appearance of what is written.

Legibility is, therefore, the prime essential of good penmanship, and with this secured, rapidity of execution is the only remaining excellence to be acquired in the matter. That handwriting which is rapidly written and easily read is good, and all others are detestably bad, as common-sense must teach every one. Now, the man or woman who makes delicate hair-strokes not only wastes time, but puzzles the reader with lines which can scarcely be seen, and which are therefore utterly abominable. As to the practice of making extravagant flourishes, it is so essentially idiotic as to need no other condemnation. When a letter is completely formed, no amount of additional flourishes can add either to its beauty or its legibility, and to make them is to waste time shamefully.

"These remarks apply to all writing, for the only worthy purpose of writing is that others may read, and there is no need to waste time writing slowly when one can write rapidly. But in writing for the press, the observance of the hints we have given is especially necessary. An editor has many demands upon his time, and manuscripts sent for publication are nearly always read at night, when he is weary with a day's drudgery. Does any one suppose articles are so scarce that the weary worker will read very far into a manuscript written in delicate lines, with small, angular letters, imperceptible up-strokes, hundreds of unnecessary flourishes, and fantastically-formed capitals—the whole, perhaps, written in faded ink? Such manuscripts may be pretty to look at, but as a rule their beauties are consigned to the waste-basket. Neither editors nor printers have time to solve the chirographical puzzles, and persons who wish to see themselves in print should at least remember that the men to whom they send manuscript care not a fig for handsome curves, if the writing be but legible. They should remember that an up-stroke is just as important as any other in the formation of a letter, and should be made quite as distinct."

A rough rowdy will write like a rowdy—a gentleman like a gentleman. A straightforward, honest man *writes* the truth as he speaks it, while the cunning, tricky rogue half conceals or covers up his meaning, so that it will mislead. A boor writes like a

boor, while one of fine sensibilities so writes that you see it in every line. Careless persons write carelessly, forgetting to date or properly sign their letters; while those with Order and Cautiousness are methodical and careful. A belligerent person writes in a sharp, abrupt, and cutting style; while a benevolent person writes in a more subdued and considerate style. Our "moods" are manifested in handwriting, and the psychologist readily detects the real character of the writer. See "New Physiognomy" for examples.

PRE-ADAMITES.

WERE there human beings inhabiting the earth, or any portion of it, *previous* to Adam? Who were they who lived in the land of Nod, where Cain went to find a wife?

In our present number an article is printed on the subject of "Pre-Adamites Found in the Bible." The views therein expressed may be new to many of our readers. Without accepting any responsibility for them, we may state that in Dr. Joseph P. Thompson's work, "Man in Genesis and in Geology," in Lecture V., where he discusses the antiquity of man, he is by no means disposed to deny positively the existence of pre-Adamites. In allusion to the theory of some writers on the creation of man, that "Adam was not the first man created, and so the progenitor of the human race, but the first called to the representative position as the son of God and the head of a new type of manhood," he says, on page 107, "Such is the theory, and although open to some serious objections, it serves to show one possible way in which the *Bible* and *science* may yet be harmonized on the question of the antiquity of man and the unity of the race. It may prove eventually that there is in this brief record in Genesis a margin for all the discoveries of science."

Scriptural commentators—of whom there are many—come to different conclusions as to the real meaning of certain passages, and we have consequently different versions of the Bible. We indulge the hope, that science will yet throw light on obscure points, and ultimately make all clear to every reader. A single comma, a single colon or semicolon, so alters the sense that a very different meaning is given to a statement. What the world wants is a *correct rendering* of the meaning of the inspired writers. Here is an example of the conflicting opinions on a single statement of St. Paul:

"Ye men of Athens, I perceive that in all things ye are too superstitious."—Acts vii. 22.

This is the common rendering of Acts vii. 22; but the learned differ greatly in relation to its real meaning. Rev. Albert Barnes reads it thus: "I perceive ye are greatly devoted to reverence for religion." Dean Alford, thus: "carrying your religious reverence very far." Techler reads: "very devout." Bengel reads the text: "I perceive that you are very religious." Cudworth translates it thus: "Ye are every way more than ordinarily religious." Conybeare and Howson read it thus: "All things which I behold bear witness to your completeness in religion."

And there probably is no doubt but what either of these renderings is much to be preferred to our common translation—King James',—because nearly all learned men are agreed that that is very unfortunate, to say the least. For it must be very evident to every thoughtful mind that St. Paul did not commence his discourse to the Athenians with an offensive epithet if he desired to have them hear him. He knew too much of human nature to do that; and there is every reason to believe, that instead of telling them that they were "too superstitious," and thus insulting them to the face, that he commended them for being religious, and then proceeded to unfold the true object of worship.

It will be seen that E. C. offers to the world a new analysis of Genesis i. 24, the correctness of which is by no means improbable. His rendering may be correct, and if so, it is a discovery which will shed a flood of light on Scriptural interpretation, and prove what Dr. Thompson has termed "one possible way in which the Bible and science may be harmonized."

E. C. is very earnest in his desire to accomplish this end, and thus bring them together in agreement upon one platform. He deplores the dissensions now existing, and believes that right interpretations of Holy Writ will bring mankind to one faith, and to God, through Christ.

We are by no means desirous of introducing new theories into the theater of theology, but we are specially desirous that the teachings of Scripture shall be clearly understood; and whether the required light proceeds from the religious or the scientific investigator, we shall give our help toward disseminating it. The article especially alluded to will serve to stir up the thoughtful, and may be an instrumental in the cause of truth

MONEY.

EDITOR OF PHRENOLOGICAL JOURNAL:—
Permit me to ask your views in answer to the following. Would it not be good policy on the part of the Government of the United States to redeem her bonded debt by the issue of legal tender Treasury notes, and establish a sinking fund for their ultimate redemption, or rather as a security for their redemption?—this sinking fund to be the accumulations of the duties on imports as collected in gold from time to time; all other taxes to be paid in legal tenders. In connection with this policy, the National Bank system should be abolished. The Constitutional power to make these issues a legal tender is certainly as unobjectionable as that of establishing a banking system. Would not the fact that it would only be changing an existing debt bearing interest for one bearing no interest have the effect of sustaining the currency at or near par value when added to the further fact of an accumulating sinking fund for the security of the bill-holders? Would it not tend to suppress the speculation incident to the issue and sale of bonds? If there were no foreign interest to pay, would not our exports pay for our imports, and the necessity for the use of gold to meet balances against us be superseded? The whole people would be interested in sustaining the currency, because it would be the common property of all. The bonds are the property of the few, which are exempted from taxation, but all other property is taxed to pay them and the interest thereon. But the objection to so large an issue of currency may be urged, that it would inflate prices, stimulate speculation, and bring disaster in the end. But would it not rather tend to stimulate the development of our mineral, agricultural, manufacturing, and shipping interest to an extent that this large issue, if made not at once but in the course of the next decade, be required by the increased business of the country? It was formerly the case, that if a bank held coin to the extent of one-third of her issues, her credit was good. Would not, then, the issues of the Government, founded on its faith, the constantly increasing sinking fund derived from Custom receipts in gold, and the rapid absorption of these bills in the payment of all other Government dues, be placed in a more favorable light?—inspiring confidence in their value as money? What sustained the credit of the Bank of England during her twenty years of suspension but the confidence of the people in

the good faith of the English Government? Have we, or ought we to have, less confidence in our Government, where every man is a sovereign, and all equally interested in supporting it?

[These suggestions, coming from a "Southern citizen," relate to a subject of vital interest to all Americans, and which is now being considerably discussed by those who take an interest in the administration of the national government. If such Treasury notes were issued, how could they be exchanged for interest-bearing bonds, especially those in the hands of foreign holders? Have we not out a large amount of bonds for the payment of which in gold the faith of the Government is pledged? How can we avoid paying them in gold? and how can we claim the right to redeem them even in gold before the time expires at which they are payable?]

A MOTHER'S LOVE.

A THING immortal; Time can not change it; Death can not quench it; Eternity can not waste or destroy it! From the cradle to the grave it compasses us about, growing stronger when temptation besets us, becoming holier when adversity tries us, and more God-like to save when the blackness of despair gathers its horrors around us. Forsaking us not, though deserted by all others, it clings to us with a spell which no charm can dissolve, with a strength which no power can sunder.

In the morning, at noonday, and at eventide, it is always ours; and though the dear heart whose every throb was actuated by it is hushed in that bosom forever; though the once soulful eyes glow not with it now, and the mute lips breathe it no more,—yea, though the coffin and the shroud, the cold clouds of the valley, and the long grasses of many a year hide from our tear-bedimmed eyes the sweet form that was ever transfigured into angelic radiance by its presence, yet from the shores of the receding Past this mother-love drifts over to us with all the vividness of the days when she was with us; and it comes back to us from the beautiful Beyond, in its infinite tenderness still yearning over us, and bringing us hope as we struggle in the close contests of life.

Going not out forever, and setting not, 'tis a guiding-star by whose far-reaching light we may pilot our frail barks from billow on to billow across the stormy sea of Time, and anchor at last at the fadeless shore of a country whose

mansions are Home indeed, hallowed and made pure by the prayerful vigils born of a mother's love.

FRANCES LAMARTINE KEELER.

A GOOD WAY TO HELP THE POOR.

IN some of the large cities, New York and Brooklyn especially, there is an established society, seemingly as nearly perfect in its workings as human agency can make it, whose object it is to find all the poor in their homes and to distribute benefits to them under careful supervision. The city is divided into many small districts, with a collector in each district who calls on all the citizens within his province to contribute money; this money is handed over with a book containing the names of the donors, and the amounts given to the Board of officers. Every subscriber has tickets given him, and these are handed to applicants for assistance, or those known to be in need, who take them to the appointed visitor for that district, and he investigates the case promptly, and awards such assistance as is required. It is not charity to give alms to beggars who go from door to door, generally with a breath strongly impregnated with whisky. And if every one would decline giving anything to such, the beggars would be obliged to go to work or obtain assistance systematically from the society at their own houses. There need not be three hours between an application for help and the obtaining of the assistance required. Persons in other cities desiring to establish something of the sort, can apply at No. 58 Bible House, New York, and obtain a report of the work of the institution in this city.

"A curious observer in St. Louis has discovered that men and boys invariably run the heels of their boots and shoes outwardly, while women and girls always run theirs over inwardly. Out of one hundred and forty-seven men and boys that passed the observer at a given point, this fact was true in every instance; out of sixty-seven women that passed, it was true in every instance but one."

So long as girls and women wear high heels to their shoes, with a very small base, their ankles will twist in or out, and the foot will roll over to one side. We often see on the streets a flock of school-girls, their short dresses permitting observation of their feet, and we are pained to notice that every ankle twists one way or the other; all of them being made more or less cripples for life.

Department of Literature, Science, Education.

TO KNOW THE TIMES, A REQUISITE FOR INFLUENCE.

THERE are few objects for which men labor more ardently than for the attainment of influence over the public. Not that it is an absolute necessity, nor even that it always brings with it a greater complement of happiness, but because wealth and honor commonly follow its attainment. Its possession requires the presence and the cultivation of some of the highest virtues. Moreover, a man's usefulness depends, to a great extent, upon the amount of his influence in society. This being the case, anything that will direct us in the acquisition of this influence can not be regarded as unworthy of our attention.

It will be necessary, in the first place, to consider certain peculiarities in the nature of society from which the necessity of an intimate acquaintance with the times arises.

It is natural for men to arrive at conclusions by slow processes of reasoning. Each step must be firmly established before the next is taken; and whatever would lead them to adopt opinions without proving well each step has in it the appearance of fraud. From this, as a source, arises the suspicion with which men regard all sudden reforms and unexpected changes; and if the revolution involves any important principle, that suspicion universally ripens into direct opposition. Hence the growth of society is gradual. It must be permitted to advance like the world of nature around us. It will progress in no other way. You can neither force reforms upon it, nor introduce changes sooner than it deems them necessary. But it must be allowed to put forth its leaves one by one, bloom in its spring-time, and bear its richest fruit in the perfection of its existence. Before the ripe corn appears, there must be first the blade, then the stalk, then the ear; so before any marked advancement society must be prepared for it by a succession of progressive changes. That preparation may be going on for centuries before the change becomes apparent. During all that time men are busily, though unconsciously, contributing to it. The peasant and the prince, the laborer and the

divine, all lend their influence. The laws, the customs of society, the opinions of the press, all lean toward it; and when, at last, the change is completed, though it may appear to the superficial observer as a plant which has sprung up in a night, it is nevertheless only the opening of the bud which has long been swelling. In this manner the events of one age are linked with those of another, and the peculiar state of the times during one period may depend upon causes that have existed centuries before. There are changes going on at present whose origin might be traced to the sixteenth or seventeenth century; and there will be revolutions in the twentieth century the sources of which might be found in events of to-day, which are deemed of but little importance. Thus society progresses slowly and imperceptibly, because there are many millions of minds that must move in unison, and therefore irresistibly, like the awful progress of time itself.

If, then, the progress of society is so slow, and is directed by such remote and deeply laid causes, is it possible for an individual to form the character of the age? Yet some maintain that a great man may impress his character upon his own times. If men still attained to a length of life equal to that of the antediluvians, then this might appear more probable. But as long as the days of men number but sixty or seventy years, and the state of society is the result of the thought, observation, and experience of six thousand years, no man alone can expect to change materially the nature of any age, or mold it according to his own desire. On the contrary, the age always forms its own great men, and every reformation reforms its own reformers. There are few things more remarkable in history than the appearance of great men just when the world stands in greatest need of them. Though society may have been in preparation for a change during many generations, it is not until the multitude cries out for that revolution, that leaders are found to aid in the consummation of what society her-

self has almost finished. They become leaders, because the opinions which were becoming prevalent among the people had gained an earlier and firmer hold upon their minds. Being more thoroughly imbued than their contemporaries with the spirit of their age, it had stamped its character upon them with a deeper impression, and the necessity of the times pointed them out as leaders. They were not the cause of the revolution, any more than the first opening blossom causes the others to appear. It is true they reacted upon their age, just as the water in which the rock is reflected throws back light and heat upon that rock; but they were, in reality, the children and the pupils of their age.

The man who attempts, by opposing the will and tendency of his age, to form it according to his wishes, will meet with no better success than the one who should try to turn the waves of the ocean. Society has gained an impetus by its past progress which is not to be withstood or turned aside by the force of an individual; and he who attempts it can adopt no surer course toward ruin. So little is the influence that a single mind can have upon society, that it is extremely dangerous to propose any important opinion sooner than the natural course of events has prepared the public to receive it. Galileo essayed it, and every one knows how he was rewarded—*pot* with such honors and praises as were lavished upon Newton only a few years afterward for discoveries in the same direction, but with the taunts and jeers of the multitude, and the gloomy cell of a dungeon.

Since, therefore, it is impossible for one mind to form the character of an age, either by opposing its tendencies or forcing its progress, there remains but one course for any man to adopt who wishes to be influential in society. He must be subject to the will of his age. He must pursue, or seem to pursue, that path along which society is advancing. Whether we consider past ages, or the one in which we live, it will still be found to hold true that the great leaders of the people have adopted this policy. The abolition of slavery was not a movement instituted by the will of an individual mind. It was a nation's desire which made its first appearance in the beginning of our republic, and became universal only after the platform, the pulpit, and the

press had exerted their utmost powers to influence the public mind in favor of that movement. But it was not until the whole North clamored for it, and the civilization of the nineteenth century demanded it, that Lincoln emancipated the slaves. It was not Lincoln who made himself a liberator. It was the voice of society which compelled him to do that which some one else soon would have done.

Since, therefore, a man can have influence in society only so far as his actions coincide with the will and tendency of the age, is there anything more evident than that a man who desires influence should be most intimately acquainted with the character of his times?

It appears to me that those who have held the highest places in the social world were not the very wise and deep-thinking men that most people suppose. On the contrary, many will agree in the opinion that there were in the thirteen colonies those who possessed deeper wisdom and could think far more profoundly than either Washington or Adams. But these men had a species of knowledge which was of far more importance to them in their circumstances than all the philosophical lore which the learned heads of the colonies contained: they were well versed in the distinctive features of their own age; they knew the character of the people they wished to lead; what that people already possessed, and what they yet required.

Human society in its progress toward perfection is governed by certain general laws. Though these laws are by no means so immutable as those which govern the animal and vegetable kingdoms, yet in their operations they are similar to other laws; and in general the same course would produce the same result, were it not disturbed and limited in its operations by the different phases which society assumes at different times. As by a close attention to the laws which govern the material world we may gain a knowledge of events which will occur in the future, so, in like manner, by attentively observing the laws of society, being careful, also, to note the peculiar phases of the time which constitute the disturbing forces, we may predict with some degree of certainty the character of results that will proceed from certain causes; that is, by a thorough knowledge of the

times we may gain foresight. And this is the prominent characteristic of all great men. Knowing the character and tendency of their age, they can look into the future; and knowing the course which society is about to pursue, they can run before it. Therefore they have the advantage of their cotemporaries. They anticipate the wants of the public, and supply them just when it calls. They grasp new ideas, and promulgate them just when a thousand others are about to seize the same opinions. They make their great discoveries when all the world is beginning to wonder if such things do not exist. They may have no better intellects than many of the multitude; but they know better than any one else in which direction the multitude is going.

Among the men who strive for influence in the world, there are those who hope to gain it by imitating the models which past history affords, and by storing their minds with the wisdom of other ages. But neither the knowledge, nor the great examples of past centuries, can supply the want of an accurate knowledge of our own times. In fact, we can obtain no certain rule of life from past ages. For, as some one observes, although man has made great progress in almost every art and every science, yet in the art of living he seems to have made no advancement. The youth of to-day enters upon his voyage of life with no better charts and no greater assurance of success than the youths of a thousand years ago. Still the shores of Time are strewn with as many wrecks as when the printing-press was unknown, and the world was supposed to float upon the waves of an infinite ocean. But this results from the very progress of society itself. We are continually advancing through unknown seas. The sea of to-day is unlike that of yesterday. Tomorrow it will assume an entirely different character. The pilots of yesterday could do nothing to-day. Those of to-day would be useless to-morrow. Once society required a Washington, afterward a Lincoln, then a Grant. If society made no progress, but stood still, it would require Washington to be repeated again and again; and all great men might be successfully imitated. But in the present progressive state of society the triumphs or the failures of men of other times

afford us no rule by which we may be directed to a successful career during this age. Should any one follow the example of Luther ever so closely, it is not at all probable that he would become eminent like Luther, or even rise out of obscurity. He would find that the nineteenth century is a far different period from the sixteenth, and he would have neither adherents nor admirers, except it might be the invisible spirits of those who sat at Luther's feet at Wittenberg, or hailed him with joy as he returned from the Diet at Worms. Both now and hereafter, the "village Hampdens," the Miltons, and the Cromwells, even though their hands might "sway the rod of empire," or "wake to ecstasy the living lyre," must be gathered undistinguished to their homes in the country churchyards. The days in which they should have lived are past. The world having had their originals, will never require them again.

From these speculations, it is plain that the success of any man in a public career depends to a great extent upon his knowledge of the character of the age. While he who adores only the opinions and the great men of the past finds his hopes continually fading and withering as soon as they appear, he who well understands his age regards it as the first object of his attention. He whose heart beats in union with the great heart of society will find little difficulty in obtaining honor and respect from men, and the liberty of exercising the greatest influence over the public.

M. L. J.

ARTESIAN WELLS IN CALIFORNIA.—So far as we can learn, there are more artesian wells in proportion to the population in California than in any other country, and yet we have a great increase in the number. Unfortunately, there is not much encouragement for trying artesian borings in most of our mountain and hill districts. The lower portions of the Sierra Nevada have a bed rock of slate with a stratification nearly vertical, and in the coast range the rock is mostly sandstone, much of which has a very steep dip. The strata which send water to the surface are covered by a layer of stone or hard clay nearly horizontal, and it is in the valleys with horizontal strata that we find our present artesian wells, and must expect to find most of those of the future. We

presume that all our larger valleys will receive supplies of water from deep sources in the course of ten or fifteen years. The boring of a well is always an experiment, however. A number of borings made in Santa Clara valley failed to reach water; one deep boring in Sacramento was a failure on account of having encountered, at a considerable depth, a stratum of loose boulders. It would be interesting to have accounts of the failures as well as of the successes. The entire number of artesian wells in California is probably not far from 400, the majority of them being in Santa Clara valley, which owes a considerable part of its wealth to them. Their water is used for irrigating many of the gardens, berry-patches, and orchards, and it moistens much land outside of the irri-

gated fields. There is an artesian well at Oakland, several at Redwood City, and a dozen or more in San Francisco, though many of those in this city do not throw their water to the surface, and steam pumps are used. Before the completion of the Bensley water works, now part of the property of the Spring Valley Water Company, the artesian wells furnished a considerable part of our water supply. At Petaluma, Los Angeles, Stockton, Santa Barbara, and Pajara valley, flowing wells have been obtained. We do not remember hearing of any flowing artesian wells in San Diego or San Luis Obispo counties, or in the district north of the straits of Carquinez. Several artesian wells have been bored of late with the diamond drill.—*Alta Californian*.

PRE-ADAMITES FOUND IN THE BIBLE.

WHAT DOES IMMORTALITY MEAN?

MR. EDITOR:—Knowing that your JOURNAL has long been identified with and taken a deep interest in whatever pertains to man, his history, and his development, mentally and physically, and that it is sustained by a class of intelligent, liberal-minded readers who are not likely to let their preconceived notions shut out progressive truth, we have thought we could at least set them to thinking on and investigating a subject of the deepest interest. Although many professing to be highly educated, and competent to present the truth, have elaborately written on this subject, they have failed to satisfy the public mind, because relying on mere inferences from uncertain history and extrinsic facts, instead of going direct to the Scriptures for facts and history as there clearly presented. We have examined many authors on the subject, and as yet we do not find one to concede that Genesis teaches, in clear and explicit language, the *creation of a pre-Adamite race*.

We are well aware of the danger incurred in this enlightened day by one of the unlearned in making inquiry into the mysteries of nature and revelation, and attempting to point out the omission to notice the precise language of Moses, which as clearly indicates the creation of Pre-Adamites as it does the creation of Adam; especially so, when taken in connection with other passages.

Of course, we will not occupy your pages with quotations of all the texts in full which we rely on for evidence, but rather presume that

those interested will, for themselves, exhaust the subject by diligently "searching the Scriptures." Such an examination, with this view of it in their minds, will prove most profitable, and modify many views of the nature and history of man, his relations to God, and his final destiny.

Genesis i. 24: "And God said, Let the earth bring forth *the living creature after his kind* [a complete sentence]; cattle and creeping thing, and beast of the earth, after his kind, and it was so." Verse 25 re-enumerates the creation of beasts, cattle, etc., without again referring to "*the living creatures*" (Pre-Adamites). Verse 28 recites the giving of dominion to Adam, which was confined to mere animal life, "*living creatures*" not being enumerated.

The language, "Let the earth bring forth the living creatures," suggests their extent, numbers, diversities, and adaptation to climates and localities more generally than the specific language addressed to Adam and his family to multiply.

According to verse 26, God specially created a new man, for the special purpose of elevating the former races, physically made of the same earth; yet, doubtless, physically improved while endowed with godlike moral qualities, of which the former races were destitute, "being without God and hope in the world." Verse 27: "So God created man in His *own* image, male and female," and commanded them (verse 28) to "multiply and re-

plenish the earth." Notice the command is as broad as the earth, as if it were intended that the new man should mingle with and marry among the Pre-Adamites, and thus elevate them physically and morally. There was nothing of Adam too sacred for such a union of the races. Adam in common was of the earth, and if godlike, that was what God intended the former races should become also, as we shall see.

In obedience to the command to multiply, Eve had two sons, Cain and Abel; and when Adam was one hundred and thirty years old, he had a son, Seth, and when he had lived eight hundred years, he had "sons and daughters."

This slow rate of birth certainly does not seem consistent with the command given to Adam to "replenish the earth," if it were expected that this were to be done by his own family only. We are told in chap. iv. 8, that Cain slew his brother Abel; thus Adam was left with but one child for a time. Verses 11-18 show that Cain was conscious of the existence of "living creatures," human beings, men having his form and physical nature, and was fearful of his life among them, lest they, the Gentiles, "being a law unto themselves," should punish him for the sin of murder. God drove Cain from his presence in the region where alone God was as yet known to live among the "Gentiles, as yet ignorant of God and without promise of redemption in Christ."

Cain, the only son of Adam, left his father's house, and in conformity with the purpose of God, married a Pre-Adamite woman, and had sons in the land of Nod, and assisted to build cities. His posterity became farmers, mechanics, musicians, etc., thus indicating that the Pre-Adamites were possessed of superior mental powers, and were inferior only in their ignorance of God.

Seth, the third son, in obedience to the command to "multiply," and from the very necessity of the case, married another Pre-Adamite, and had children.

We thus see that there was the creation of *two distinct races*—Pre-Adamites, human beings, like unto Adam in physical nature and natural affections and mental qualifications, but lacking his "godlike" element; hence, "without God and hope in the world," but destined to be engrafted on his nature by marriage and association, and thus the whole human race would be united to God, through Christ, who was to appear in the line of Adam.

Chapter v. clearly manifests the purpose

of God to preserve the genealogy of Adam's family.

We see embraced in this genealogy the mixed descendants of Seth and his pre-Adamite wife; Enoch was descended from such marriage, and because he was pious, God took him to the "world of spirits," where all go, consciously, as free agents, to live out their natural soul-lives, to the end of time; there to enjoy the benefits of redemption, and the intercessions of their High Priest for their common salvation. They become immortal only if, by choice, they become partakers of His Divine nature, which, superadded to their mortal soul-nature, renders them capable of becoming immortal; otherwise they must cease to live, at the end of time, and die eternally, i. e., become unconscious.

This is all susceptible of proof in the New Testament, to all not blinded by preconceived notions and sectarian teaching. Paul said to the Romans, chap. viii. 19, "For the earnest expectation of the *creature* [Gen. i. 24] waiteth for the manifestation of the sons of God.

20. "For the *creature* was made subject to vanity, not willingly, but by reason of him who hath subjected the same in hope.

21. "Because the *creature itself* also shall be delivered from the bondage of corruption, into the glorious liberty of the children of God.

22. "For we know that the whole *creation* groaneth, and travaileth in pain *together* until now.

23. "And not only *they*, but ourselves also, which have the first-fruits of the Spirit, even we ourselves groan within ourselves, waiting for the adoption, *to wit*, the redemption of our body.

27. "And he that searcheth the hearts knoweth what is the mind of the Spirit, because he maketh intercession for the saints, according to the will of God."

See also Romans viii. 28-39; chapters x., xi., xiv., and xv.

Chapter xvi. 25: "Now to him that is of power to stablish you according to my gospel, and the preaching of Jesus Christ, according to the revelation of the mystery, which was kept secret since the world began." Compare, also, Ephesians, chapters i., ii., and iii.

Chapter ii. 10, "For we are his workmanship, *created* in Christ Jesus unto good works, which God hath before ordained that we should walk in them.

11. "Wherefore remember, that ye being in time past Gentiles in the flesh, which are called Uncircumcision by that which is called Circumcision in the flesh, made by hands;

12. "That at that time ye were without Christ, being aliens from the commonwealth of Israel, and strangers from the covenants of promise, having no hope, and without God in the world.

13. "But now, in Christ Jesus, *ye* who were *sometimes* [formerly] *afar off*, are made nigh by the blood of Christ.

14. "For he is our peace, who hath made *both one*, and hath *broken down the middle wall of partition between us*.

15. "Having abolished in his flesh the enmity, even the law of commandments contained in ordinances, for to make in himself of *twain one new man*, so making peace;

16. "And that he might reconcile both unto God in one body by the cross, having slain the enmity thereby;

17. "And came and preached peace unto you which were afar off, and to them that were nigh.

18. "For through him we both have access by one Spirit unto the Father.

19. "Now therefore ye are no more strangers and foreigners, but fellow-citizens with the saints, and of the household of God;

20. "And are built upon the foundation of the apostles and prophets, Jesus Christ himself being the chief corner-stone;

21. "In whom all the building fitly joined together, groweth unto a holy temple in the Lord;

22. "In whom ye also are builded together, for a habitation of the Spirit."

Chapter iii. 1, "For this cause, I Paul, the prisoner of Jesus Christ for you Gentiles,"

3. "How that by revelation he made known unto me the mysteries as I wrote afore in a few words."

5. "Which in other ages was not made known unto the sons of men, as it is now revealed unto his holy apostles and prophets by the Spirit,

6. "That the Gentiles should be fellow-heirs and of the same body, and partakers of his promise in Christ by the gospel."

9. "And to make all men see what is the fellowship of the mystery, which from the beginning of the world hath been hid in God who created all things by Jesus Christ."

Now let any one take Cruden's Concordance, and follow up the texts under the words "Gentiles," "Created," "Creation," "Creatures," "Mystery," "Immortality," "Mortal," "Mortality," "Destroy," "Destroyed," "Perish," and words of kindred meaning, and it will be seen that the Bible teaches a pre-Adamite

race as well as an Adamite, and that all are embraced in the Gospel, and subjects of salvation, having been made by creation and adoption and marriage a common brotherhood, but mortal only, naturally, capable of becoming immortal through a partaking of the Divinity of Christ, a gift which nature can not impart, and which is not forced on man unconsciously as the natural life, but which must be sought for by a matured, intelligent act, either here, or in the world of spirits, or in both. Colossians i. 20, iii. 10; 2 Corinthians xii. 4; 1 Thessalonians v. 10; Hebrews ii. 15, and xii. 23; 1 Peter iii. 19, and iv. 6; 2 Peter i. 4; 1 John v. 12; Romans xiv. 9; John iii. 6.

Acts xvii. 26. "And hath made of one blood all nations of men for to dwell on all the face of the earth, and hath determined the times before appointed, and the bounds of their habitation."

Many have quoted this text to prove that all race of men have descended from Adam, in opposition to the theory of the creation of different races, before and distinct from Adam, adapted to different centers of the earth."

Paul, in this connection, was showing the worshipers of "unknown" gods that God made the world, and all things therein; was Lord of heaven and earth; and giveth to all, life, breath, and blood, and that in him "we live, and move, and have our being," and were "his offspring." That all being of the earth, in their physical nature, derived their food therefrom, furnishing a common blood, the life of our physical natures, to all peoples, nations, or races, for all ages, wherever located, and that all were equally bound to worship their common Father.

He elsewhere taught that the different characteristics of races resulted, not from their blood, but from their seed.

1 Corinthians xv. 38 "And to every seed its own body." Gal. iii. 16, "Now to Abraham and his seed were the promises made," referring to Genesis iii. 15, "And I will put enmity between thee and the woman, and between thy seed and her seed."

Genesis xii. 7, "And the Lord appeared unto Abram, and said, Unto thy seed will I give this land."

Isaiah liv. 3, "For thou shalt break forth on the right hand, and on the left, and thy seed shall inherit the Gentiles, and make the desolate cities to be inhabited."

Ezra ix. 2, "For they have taken of their daughters for themselves, so that the holy seed have mingled themselves with the people of other lands."

Nehemiah ix. 2, "And the seed of Israel separated themselves from all strangers."

Physiology teaches that the distinctive features of each race, physically and mentally, are preserved by the secret elaborations of nature, of the seed of each, in the generative organs of each individual of each race, and not from the blood elaborated from the common food of all; which is seen in the Jews, who have preserved their identity among themselves, while partakers of the common blood of all nations.

Genesis x. 5, "By these were the isles of the *Gentiles* divided in their lands."

Conant's translation says these *Gentiles* were pagan nations.

The incident mentioned here occurred soon after the flood, and the nations are here first called *Gentiles*. As yet, the descendants of Adam had not become pagan nations; they were still a chosen people, to become a "light to the *Gentiles*." Had there been no existing races of "living creatures" before Adam, there would have been no necessity for creating a *special family to become a light*. The fact of Genesis i. 24 fixing the creation of *Gentile* nations prior to the creation of Adam, establishes their chronology on the same basis, indefinite as to time, with all the rest of creation. The manifestation of the works of God are lawful data on which to exercise our God-given reasoning powers, and thus lead us to Christ.

We thus ret at the original creation of *mortal man*, "without God and hope in the world," *soul-creatures* born here naturally, passing to a "world of spirits," there to live out the natural term of their soul-lives, to the end of time.

Then came the introduction on earth of Adam, "with God and hope in the promise of redemption," united in God's purpose, by marriage, and partaking of all the promises and provisions for redemption, in Christ, all passing to the world of spirits, to which they are redeemed, and of which they may profit through the intercession of Christ, by accepting the gift of His own life. It is thereby that they become *immortal*, for in Him is the only hope of immortality. If rejected, they are to be destroyed, to perish, *i. e.*, cease to live—eternal death. Thus is presented a focal point, as it were, to which all sects must come, and acknowledge the Divinity of Christ. The Universalian is here deprived of his plea of God's mercy saving him from eternal misery. The Unitarian is deprived of hope only by not accepting the Divinity of Christ. The Restorationist is deprived of his plea of mercy limiting his punishment. The Predestinarian is

denied his doctrine of predestination of a part to eternal misery. The Methodist doctrine of man's natural immortality and an eternal hell falls to the ground. The Jews, also, must here recognize their only hope of salvation. All sects are brought to the one idea, that all men are *naturally* mortal, the life of the soul being limited to the end of time; and the immortality beyond that being the result of becoming partakers of the Divine nature through an intelligent choice. This doctrine certainly involves favorable circumstances for *all men*.

A careful study of the Bible, in our opinion, inevitably leads to these conclusions. This age is seeking for truth, in all departments of knowledge, and nothing is so interesting or important as the subject here presented. It is sad to see the truths of Christ so inefficient, a condition resulting from the errors of sects. The common people must think for themselves, and reject those errors which keep the world in sin and ignorance, and support those preachers who dare to preach the truth as taught by Christ and Paul.

"He that hath the Son hath life; and he that hath not the Son of God hath not life."

The life here spoken of is the Divine nature, imparted to those seeking for it, and which is to be superadded to their mortal lives. Without it, mortal life ceases; eternal death succeeds,—not death in an eternal living misery, as a punishment for sins of a limited time-life. Time carries with it all the punishment which the mercy of God requires. His nature revolts at superadding immortality to a rebellious life. We are told that death, hell, grave, and Satan are to be destroyed at the end of time; and the wicked doctrine of *eternal hell-fire*, and predestination of sinners to it, should cease to vex us in this enlightened day. Christ teaches no such thing. Our natures revolt at it. It is a slander on the character of God. Nothing too hard can be said against a doctrine that drives sinners from Christ. He died to redeem all, and now intercedes for all, and all may be saved.

Doubtless this article will provoke inquiry and tend to a discussion of its utterances in religious papers. But it can do no harm. Truth must result from such a discussion. Believers in a pre-Adamite race need no longer to grope in the dark for want of a Scriptural basis. Starting from such a point, correct theories of distinct races in different centers may be established; and yet a common brotherhood is to be seen and felt. Pre-Adamites are seen "without God and without hope," hence natu-

rally mortal; capable of becoming immortal, in the great plan of God. Adam was endowed with godlike qualities; made mortal, yet capable of becoming immortal. He refused this immortality, and fell; but there followed the promise of an immortal Saviour, and a capability for accepting the immortality offered through Him. This hope Adam had, and by a union of the races, both became the subjects of hope. Christ being born of the family, representing each race, united all in Him, and made it possible for all to be redeemed and to partake of His nature.

Had Adam partaken of the "tree of life," it would simply have warded off physical death until he was translated, as Enoch was, to a world of spirits, where it doubtless was the purpose of Christ to have appeared in behalf of the whole race of creation, and there afforded living souls the opportunity of accepting of His Divine life. There He would destroy the works of the devil, in having tempted human mortal souls to rebel against God here. Such souls were made subject to "spiritual influences, principalities and powers" while in the flesh. This fleshly tabernacle was made merely introductory to another spiritual life, where human souls could more readily resist the powers of darkness, and freely choose to be governed by Divine influences, and become partakers of Christ's life, and thus and there become immortal and be prepared for a final heaven. Where else could it be possible for the bulk of mankind to receive all the benefits of redemption but in the world of spirits during time?

CONANT'S TRANSLATION.

Genesis i. 20. "And God said, Let the water swarm with swarms of living beings; and let fowl fly above the earth, along the expanse of the heavens.

"21. And God created the great sea monsters, and every living being that moves, with which the waters swarm, after their kind, and every winged fowl, after its kind; and God saw that it was good.

"22. And God blessed them, saying, Be fruitful and multiply, and fill the waters in the seas; and let fowl multiply on the earth.

"23. And there was evening, and there was morning, a fifth day.

"24. And God said, Let the earth bring forth the living being after its kind, cattle, and reptile, and beast of the earth, after its kind; and it was so.

"25. And God made the beast of the earth after its kind, and cattle after their kind, and every reptile of the ground after its kind; and God saw that it was good.

"26. And God said, We will make man in our image, after our likeness; and they shall rule over the fish of the sea, and over the fowl of the heavens, and over the cattle, and over all the earth, and over every reptile that creeps on the earth.

"27. And God created the man in his image; in the image of God created he him; a male and female created he them.

"28. And God blessed them; and God said to them, Be fruitful, and multiply, and fill the earth, and subdue it; and rule over the fish of the sea, and over the fowl of the heavens, and over every living thing that moves on the earth."

Verse 21. It will be noticed that the words "living being" (creatures, in King James') are used as a general term, embracing all the varieties created to live in the waters, each of which "after their kind," and the same words "after their kind," are applied to every "winged fowl."

The inferences from verses 21 and 22 are plain: that the different creations were as broad as the extent of seas and earth, and not confined to any one locality.

Verse 24. Notice the construction of this verse, with its punctuation, "the living being," the same as between cattle, reptile, and beast, each to increase its species after "its kind," clearly giving the creation of living beings (creatures), natural man, as yet "without God and hope in the world" until Adam, and God's presence with him, and the promise.

The words (verse 24) "after its kind," applied to "the living being," clearly limit their increase to the beings created, and also show the character of the creation to be distinct from the specific mention of the different creations of "cattle, and reptile, and beast," each to increase from its own kind; and the breadth of the words, "Let the earth bring forth," as clearly indicates the general distribution of each creation over the earth. Strike out the words "after its kind," verse 24, as applied to "the living being," and let the words "the living being" be a general term, embracing "cattle, reptile, beast," as used in verse 20, embracing all creations of the water, each of which were to increase "after its kind," and it will appear more plausible to apply verse 24 to the mere creation of animal life. It would then read, "Let the earth bring forth the living being, *as* cattle, reptile, beast, after its kind." Or, Let the earth bring forth the living being after its kind, *as* cattle, reptile, beast.

We must take the record as it is. Each cre-

ation is distinctly specified. And to make it clear, each is limited in its natural increase to its own kind.

The difficulties attending the usual construction of verse 24, as applying to animal life only, are greater than those we advocate; for the reason that what we advocate is a solution to many vexed questions arising from the manifest evidences of man's existence prior to and coeval with Adam; and the evident purpose in the new creation of Adam—"Son of God"—by marriage, and union of the races of man, to elevate the condition of humanity, until then "without God and hope in the world," as shown by St. Paul.

It will be noticed (verses 26-28) that the words "after their kind," in obedience to the command to multiply and fill the earth, are not there.

The distinguishing feature in Adam's creation consisted in superadding to his human nature, possessed by the former races of man, his godlike elements of moral qualities, knowledge and love of God and man. Those qualities and his humanity were in harmony with the command of God to marry the existing races, as seen by the circumstances, doubtless providential, Gen. iv. 12-17, as a means of imparting to those "without God and hope" those qualities bestowed on Adam, and thus unite all in Christ. Had the character of former races lacked harmony with that of the nature of Adam and the purposes of God, he might also have been restricted to his kind, and his instincts and moral sentiments would have revolted. But while no prohibition to thus marry exists, we see his whole nature and that of his descendants are merged in former races, and Seth's descendants make up the genealogical record in which Christ was to come; and one of them, Enoch, translated to Paradise, showing there was nothing in the nature of former races repugnant to union with that of Adam.

We have thus given Conant's translation of Genesis, because recent and not so well known, to show by our comments the general omission to notice the fact of creation of natural man before that of Spiritual Adam.

The same comments will apply to King James' translation.

In further proof the following is offered:

Colossians i. 15. "Who is the image of the invisible God, the first-born of every creature." 16. "For by him were all things created that are in heaven, and that are in earth, visible and invisible, whether they be thrones, or

dominions, or principalities, or powers; all things were created by him and for him," (read full chapter) showing the order to be:

1. Christ the first-born of every creature, before creation.

2. Christ created "the living creatures," for himself.—Gen. i. 24.

3. Christ created the first Adam "a living soul"—1 Corinth. xv. 45.

4. Christ appeared as the second Adam, "a quickening spirit" (1 Corinth. xv. 45), to perfect his work.

St. Paul describes the character of each creation, its history and destiny. First in order we have:

Romans viii. 20. "For the creature [Gen. i. 24] was made subject to vanity, not willingly, but by reason of him who hath subjected the same in hope."

Ephesians ii. 12. "That at that time ye [Gentiles] were without Christ, being aliens from the commonwealth of Israel, and strangers from the covenants of promise, having no hope, and without God in the world."

Also, Ephesians i. 4-9, 10. Adam, as a representative man, was soon to be placed in a condition to test his godlike endowments, as a free agent capacitated to receive or reject the gift of immortality from Christ, typified by the "tree of life" in the garden of Eden, where he was placed.—Gen. ii. 9. Verse 17. God permitted him to eat of every tree, as well as of the tree of life, except of the "tree of knowledge of good and evil," of which, if he did eat, that "living soul" of his should surely die. He should become as all before him, subject to physical death, as well as mortal in his soul-life, limited to time, the end of the world.

Gen. iii. 4-5, 22. He was overcome by the temptations of Satan, to whom all men are subjected in a state of nature (Ephesians vi. 12; Romans viii. 38); and "lest they should partake of the tree of life, and become immortal," that tree was guarded, and they driven from it, and left mortal, body and soul, as all before them, without hope in the world of ever becoming immortal.—Gal. iii. 22; Romans xi. 32.

But God in his purpose, through Christ, the "first-born of every creature," before the foundation of the world, and its creation, and the creation of "living creatures" for himself (Genesis iii. 15), presented to the hopes of a common humanity, in a common condition as to a future life, the promise of a Saviour, who would impart his own Divine life to all mortal souls; a life capable of "destroying the works

of the devil" (1 John iii. 8), so that they would in the exercise of their own intelligent, free agency live out their soul-lives to the end of time, in obedience and faith in him; otherwise, the term of their soul-lives would naturally expire at the end of time. To this end (1 John iii. 8) Christ came, lived, died, preached to the world of spirits, rose to earth, and ascended to Paradise, as the High Priest of all, to intercede for them to the end of time (Hebrews ix. 24); and those accepting of his gift of immortality will have their probationary time extended to an eternal life, and the others will practically die, cease to live, perish, as taught by Christ; hence there is no immortality for the sinner or Satan.—Rev. xx. 10, 14. St. Paul's description of Christ's first creation of "living creatures" (Gen. i. 24), in the above and frequent texts, when alluding to men as "creatures," solves the vexed question of pre-Adamites, their nature, and exact spiritual relation to Christ.—Romans ii. 14; Gal. iii. 23. Gen. iv. 15 shows the Gentiles subjects of law, and Gen. iv. 17–26, and vi. 4, show them possessed of great intellect and physical perfection, equals of Adam, except in those additional endowments intended to be transmitted by intermarriage. Gen. ii. 24. In becoming one flesh they acquire the same human form Christ assumed, as the first-born creature before the foundation of the world; which explains the word "image" in which Adam was made.

Second in order: Gen. i. 26. "And God said, Let us make man in our image, after our likeness." Nothing is said of limiting them to their kind by marriage, as to others; as their kind existed. It will not be denied to the former "living creatures," but they also were "living souls." Their description by Paul, of being without God and hope in Christ, and the nature of the additional elements imparted to Adam, indicates the meaning of the words "living soul," as applied to Adam, a representative man, God manifesting himself through and in Adam, to the past and future, as subsequently in Christ, by which all become one in him.

That such was the object of a special creation of a new man called "the first man, Adam," Cain and Seth, in obedience to the command to multiply, and under the law of their physical, mental, and moral nature, fell in love with and married pre-Adamite women; becoming one in flesh with them; their descendants, a mixed race, making up the genealogical record, are recognized in the New Testament as the legitimate line of descent from Adam to Christ, in

which family Christ appeared, to save all, as a "quickening spirit."

Third in order: 1 Cor. xv. 45. The first Adam was made a "living soul," the last Adam a "quickening spirit."

One precedes the other in point of time, 1st the natural, 2d the spiritual (46th verse), but both are involved in the original purpose of God.

Eph. iii. 6. "That the Gentiles should be fellow-heirs, and of the same body, and partakers of his promises in Christ by the Gospel," and balance of chapter. The first creation of natural men, as distinguished from more spiritual ones, was mortal only, their soul-lives limited to time only, the end of the world, with no promises of immortality in Christ.

The second creation was endowed with a knowledge of God, and of good and evil, which comprises the word *likeness*, and with capacities of communing with and seeking God, and having his promises of immortality in Christ, through faith and obedience.

By the order of God they became one, with one common nature, knowledge, and hope, equally free agents, and responsible here and in the spirit-world for the acceptance or rejection of Christ's Divine nature, by which alone can man become immortal.

2 Peter i. 4. Christ's nature is offered as a gift of that not derived from mere human nature; nor is it forced on us as our natural lives, but comes from the choice of intelligent free agents.

This at once involves a spirit-world, wherein man generally is favorably situated with reference to duty, considering all that pertains to another and eternal life.

Here, ignorance, idiocy, infancy, death, and satanic influences disqualify souls in the flesh from the full accomplishment of the work Christ will do for them in the world of spirits, as their High Priest interceding for them to the end of time.—Romans xiv. 9. Christ is Lord of the dead as well as the living. 1 Peter iii. 19; and in iv. 6, it is seen that spirits shall be judged as men in the flesh, a comforting doctrine, but little understood and thought of. See Matt. xxii. 32, and xxv. 34; Mark x. 6–7, and xii. 26–27, and x. 30; Luke xvi. 30–31, and xx. 35–38, and xxiii. 43; 1 Cor. ii. 8; Romans xiv. 9, xv. 16–27, xvi. 25; Colossians i. 23; 2 Cor. vi. 17; Romans viii. 2; Luke ii. 32, and St. John v. 24–25.

Let those who deny our interpretation of Gen. i. 24, see how it is possible to apply the numerous references of St. Paul and others

otherwise than we have done. The free use of Cruden's Concordance will greatly assist the investigation. See the word "Creature" in it, as generally used; also the words "Gentiles," "Giants," "Heathen," "Christ," "Chosen," etc. The "Emphatic Diaglot Testament" is a valuable reference also on many points.

The character of Paul's writings and earnest ministry suggest that the great majority of mankind are the offspring of the different races of pre-Adamites—Gentiles—who had migrated beyond the limits of the flood, the question of whose extent is as yet undetermined in the minds of many competent to present many facts against its universality, and to explain the language in describing it.

Gen. i. 24. The command, "Let the earth bring forth the living creature after his kind," signifies great breadth, numbers, and variety, judging from the effect of the same language applied to animal life; and verse 28, the command to Adam without an express limit "to his kind" as to others, was to be "fruitful, multiply, and replenish the earth," suggesting the mixtures of races, with Adam beyond the limits of the flood. True, in 2 Peter ii. 5, St. Paul speaks of the flood destroying the people of the *old world*; but the facts against its universality, and his arguments in behalf of salvation for the Gentiles, not likely the descendants of Noah, are against the theory of a universal flood. Let him be read closely by the light of science and recent translations, and it will be seen a limited flood.

If the manner in which we have presented our views should induce a thorough investigation of the facts urged, and they be found true,

it must result in giving more prominence to the essential doctrines of Christ, and eradicate many doctrinal errors, while furnishing some light to science and the age.

In searching Genesis 1st chap. for the history of the first creation of "living creatures," and to meet the objections of many to the construction of the language and sentences heretofore overlooked by learned translators, commentators, theologians, and scientific explorers for knowledge, we found it essential to fortify the discovery by the fact that the inspired records so clearly refer to the apparently *hidden* mystery. By reflecting the inspired writings of St. Paul on the hitherto obscure language of Moses, it is brought out as clearly as that of the creation of Adam.

Ephesians iii. 9. "And to make all men see what is the fellowship of the mystery which, from the beginning of the world, hath been hid in God, who created all things in Jesus Christ."

Because of the blending of the whole of man in the inspired record, we have seemed to embrace more than essential to prove the existence of pre-Adamites. The whole chain from Christ, the first-born creature, to the end of his intercessions and of time is inseparably connected, as a series of practical tangible facts and ideas, worthy of the tongues and pens of the most exalted angels to elucidate and make clear to a fallen world.

Are there any other subjects so worthy of your columns, which profess to be devoted to man—his nature, history, and improvement, as here presented?

E. C.

NEW YORK, December 15, 1871.

GOVERNOR WASHBURN OF MASSACHUSETTS.

HERE is a calm, careful, common-sense, practical intellect. His cast of mind is almost severely utilitarian. What is the use of it? What can be done with it? are among his first questions. There are no extravagant flights of fancy, comparatively little imagination or poetical sentiment, little or no non-sense in his composition. His mental operations are as clearly performed as if by square and compass.

A quiet, cool self-reliance, with natural dignity and decision, is shown here. It requires no struggle or effort for him to say No, and stick to it; and he is not inclined to promise more than he can perform. "I am at your service, gentlemen. What are your wishes? If left to my own discretion, I shall pursue

such and such a line of policy, having in view always the dignity and prosperity of the State and the nation." If not Websterian in intellect, or Napoleonic in ambition, he is not liable to come to wrong conclusions or adapt his measures to selfish ends.

He is a fair and square American citizen; he knows what is right, and he will do it. Rogues and demagogues in politics there are, but neither of these traits will ever be charged to this gentleman. That physiognomy (look at the portrait) tells the story of the character. It indicates a keen, quick, penetrating mind, thoroughly systematical and methodical in all its proportions, with sufficient intuition to forecast coming events; and thus to be always forewarned and forearmed. With such cap-

tains at the helm, our democratic republic will be safe from wreck and ruin. Let other States follow the example of Massachusetts and elect honest, temperate, and godly men to all places of trust.

The "Old Commonwealth" at her recent election conferred the highest office in the gift of her people upon a manufacturer by vocation, but a gentleman of wide experience in political affairs.

The new Governor of Massachusetts, William B. Washburne, was born at Winchendon, in that

expiration of his first term. On each occasion when his name has been brought before the public as a candidate for office, he has been elected by a large majority, little or no organized opposition being brought to bear. His chief service in Congress has been as Chairman of the House Committee on Claims, a difficult and laborious position whose duties Mr. Washburn discharged with strict integrity and unfailing conscientiousness. He enjoyed, in a marked degree, the confidence of his Congressional associates, and as a man among



State, in 1820, and graduated from Yale College in 1844. Shortly after leaving college he engaged in the manufacturing business, with which he is still connected. He has also been for many years President of the Greenfield Bank. He is by no means without political experience, for, as is well known, he has served in both branches of the State Legislature, and with no little credit to himself and satisfaction to his constituents. In 1862 he was chosen to represent his district in Congress, and was re-elected at the

men it is said that he invariably gains the esteem of all upright persons with whom he may come in contact. According to a writer in *Every Saturday*, he is a man of the highest personal purity, not specially gifted with oratorical powers, but capable of making a plain, straightforward speech, addressed to the calm judgment and moral conscience of his hearers. With his antecedents fully in view, it may be expected that Mr. Washburn, as Governor of Massachusetts, will prove a prudent, dignified, and efficient executive.

A MARVELOUS CONJURER.

THE Russians have long exhibited a remarkable taste for juggling, and all that smacks of the marvelous. Conjurers, professors of natural magic, ventriloquists, and the entire race of mountebanks, who in France and England astonish the gaping crowds at races and country fairs, ever find a welcome and liberal encouragement among the higher classes in the Russian cities. About the beginning of the present century a species of Cagliostro, or rather a superior kind of Wizard of the North, made his appearance at St. Petersburg, and astonished the natives by his marvelous performances. His name was Pirnetti, and his fame is yet retained in the memory of those who witnessed his unrivaled talents.

The Czar Alexander, having heard Pirnetti much spoken of, was desirous of seeing him; and one day it was announced to the conjurer that he would have the honor of giving a representation of his magical powers at court, the hour being fixed for him to make his appearance being seven o'clock. A brilliant and numerous assembly of ladies and courtiers, presided over by the Czar, had met, but the conjurer was absent. Surprised and displeased, the Czar pulled out his watch, which indicated five minutes after seven. Pirnetti had not only failed in being in waiting, but he had caused the court to wait, and Alexander was not more patient than Louis XIV. A quarter of an hour had passed, half an hour, and no Pirnetti! Messengers who had been sent in search of him returned unsuccessful. The anger of the Czar, with difficulty restrained, displayed itself in threatening exclamations. At length, after the lapse of an hour, the door of the saloon opened, and the gentlemen of the chamber announced Pirnetti, who presented himself with a calm front, and the serenity of one who had done nothing to reproach himself with. The Czar, however, was greatly displeased; but Pirnetti assumed an air of astonishment, and replied with the greatest coolness, "Did not your majesty command my presence at seven o'clock precisely?"

"Just so!" exclaimed the Czar, at the height of exasperation.

"Well, then," said Pirnetti, "let your majesty deign to look at your watch, and you will perceive that I am exact, and that it is just seven o'clock."

The Czar, pulling out his watch violently, in order to confound what he considered a piece

of downright insolence, was completely amazed. The watch marked seven o'clock! In turn all the courtiers drew out their watches, which were found as usual exactly regulated by that of the sovereign. Seven o'clock! indicated with a common accord all the watches and clocks of the palace. The art of the magician was at once manifest in this strange retrogression in the march of time. To anger succeeded astonishment and admiration. Perceiving that the Czar smiled, Pirnetti thus addressed him:

"Your majesty will pardon me. It was by the performance of this trick that I was desirous of making my first appearance before you. But I know how precious truth is at court; it is at least necessary that your watch should tell it to you, sire. If you consult it now, you will find that it marks the real time."

The Czar again drew forth his watch,—it pointed to a few minutes past eight; the same rectification had taken place in all the watches of those present, and in the clocks of the palace. This exploit was followed by others equally amusing and surprising. At the close of the performances, the Czar, after having complimented Pirnetti, brought back to his remembrance that in the course of the evening's amusements he had declared that such was the power of his art that he could penetrate everywhere.

"Yes, sire, everywhere!" replied the conjurer, with modest assurance.

"What!" exclaimed the Czar, "could you penetrate even into this palace, were I to order all the doors to be closed and guarded?"

"Into this palace, sire, or even into the apartment of your majesty, quite as easily as I should enter into my own house," said Pirnetti.

"Well, then," said the Czar, "at mid-day to-morrow I shall have ready in my closet the price of this evening's amusements—one thousand rubles. Come and get them. But I forewarn you that the doors shall be closed and carefully guarded."

"To-morrow, at mid-day, I shall have the honor of presenting myself before your majesty," replied Pirnetti, who bowed and withdrew.

The gentlemen of the household followed the conjurer to make sure that he quitted the palace; they accompanied him to his lodgings, and a number of police surrounded the dwelling from the moment he entered it. The palace was instantly closed, with positive

orders not to suffer, under any pretext whatever, any one to enter, were he prince or valet, until the Czar himself should command the doors to be opened. These orders were strictly enforced, confidential persons having watched their execution. The exterior openings to the palace were guarded by the soldiery. All the approaches to the imperial apartments were protected by high dignitaries, whom a simple professor of the art of legerdemain possessed no means of bribing. In short, for greater security, all the keys had been carried into the imperial cabinet. A few moments previous to the hour fixed for Pirnetti's interview with the Czar, the chamberlain on service brought to his majesty a dispatch which a messenger had handed him through an opening in the door. It was a report from the minister of police that Pirnetti had not left home.

"Aha! he has found out the undertaking is impracticable, and he has abandoned it," observed the Czar, with a smile.

Twelve o'clock sounded. While the last stroke yet reverberated, the door which communicated from the bedroom of the Czar to the cabinet opened, and Pirnetti appeared. The Czar drew back a couple of paces, his brow darkened, and after a momentary silence he said, "Are you aware that you may become a very dangerous individual?"

"Yes, sire," he replied; "but I am only an humble conjurer, with no ambition save that of amusing your majesty."

"Here," said the Czar, "are the thousand rubles for last night, and a thousand for this day's visit."

Pirnetti, in offering his thanks, was interrupted by the Czar, who, with a thoughtful air, inquired of him, "Do you count on yet remaining some time in St. Petersburg?"

"Sire," he replied, "I intend settling off this week, unless your majesty orders a prolongation of my sojourn."

"No!" hastily observed the Czar; "it is not my intention to detain you; and, moreover," continued he, with a smile, "I should vainly endeavor to keep you against your will. You know how to leave St. Petersburg as easily as you have found your way into this palace."

"I could do so, sire," said Pirnetti; "but far from wishing to quit St. Petersburg stealthily and mysteriously, I am desirous of quitting it in the most public manner possible, by giving to the inhabitants of your capital a striking example of my magical powers."

Pirnetti could not leave like an ordinary

mortal; it was necessary that he should crown his success in the Russian capital by something surpassing his previous efforts; therefore, on the evening preceding the day fixed for his departure, he announced that he should leave St. Petersburg the following day, at ten o'clock in the morning, and that he should quit by all the city gates at the same moment! Public curiosity was excited to the highest degree by this announcement. St. Petersburg at that time had fifteen gates, which were encompassed by a multitude eager to witness this marvelous departure.

The spectators at these various gates all declared that at ten o'clock, precisely, Pirnetti, whom they all perfectly recognized, passed through. "He walked at a slow pace and with head erect, in order to be the better seen," they said; "and he bade us adieu in a clear and audible voice." These unanimous testimonies were confirmed by the written declaration of the officers placed at every gate to inspect the passports of travelers. The inscription of Pirnetti's passports was inscribed in the fifteen registers. Where is the wizard, whether coming from the north or south, who could in these degenerate days perform so astonishing an exploit?

WISDOM.

POETICAL PROVERBS.

Wise men in their wisdom may more wisely walk;
 Untempered with prudence, more like a fool talk.
 Long counsel and argument by the shipload
 Weigh less than one fact, and are never so good.
 The talker who winneth, speaks brief and is done,
 Ere "garrulous gassers" have scarcely begun.
 A fact, or the honest truth modestly put,
 No trick or deception can ever rebut.
 If judges and senates have been oft bought for gold,
 The love of true lovers has never been sold.
 Be seldom a borrower; less seldom lend;
 As loaner oft loseth both money and friend.
 The friends thou hast tested in woe and in weal,
 Clasp dear to thy bosom, as with hooks of steel.
 The way to get quit of an obtruding friend
 Is, lend him a purseful of money to spend.
 Who often dissembleth, can never, forsooth,
 Inspire with credence when telling the truth.
 The footsteps may soon be recovered from slips;
 But who can recall the deceit of his lips?
 A fault, or a falling, or error confessed,
 Like buying and paying, is wrong half redressed.
 Who breaketh his promise, proves false and untrue,
 Will find in return others false to him too.
 When scornful despisers will of thee speak ill,
 So live that thy neighbors will of thee think well.
 Take heed to advice of wise friends on the spot,
 Though like hasty counsel it pleaseth thee not.

Who earneth and spendeth at once every penny,
 Shall ever be earning, and never have any.
 Who loveth the shadow, and shunneth the heat,
 Shall hunger in winter for something to eat.
 Who sleepeth with ban-dogs his muscles to ease,
 Shall rise from his slumbers tormented with fleas.
 Lend horse for a journey, with carriage to kin;
 The chaise *may* return with the bones and his skin.
 A steed that is borrowed has never a soul;
 So fool's purse is emptied without any hole.
 A rich table groaning beneath costly beef,
 Oft robbeth the pocket like pilfering thief.
 When husband is fire, and housewife is tow,
 They serve well the devil wherever they go.
 Domestic eruptions, brawls, wrangles, and strife,
 Are managed by Satan to embitter life.
 Indulge an ill nature in ill-natured trick,
 And closer than brother ill nature will stick.
 Who keepeth his thoughts and his clothes clean and neat,
 Must shun altercations with black chimney-sweep.
 Who hath none to soothe him may weep out his eyes;
 Who hath none to love him, in solitude dies.
 Who stupidly playeth the ninny indeed,
 Will never lack folly when fools are in need.
 Who loveth good company, and shunneth the ill,
 May have boon companions whenever he will.

SERENO EDWARDS TODD.

THE plain duty of the happy is to help the suffering to bear their woe.

EDUCATION is a better safeguard of liberty than a standing army. If we retrench the wages of the schoolmaster, we must raise those of the recruiting sergeant.—*Everett.*

THERE were easy ways that ran around the base of the hill Difficulty, but the name of the one was Danger, and of the other Destruction; the only right way was straight up the hill.

WHEN we are young, we are slavishly employed in procuring something whereby we may live comfortably when we grow old; and when we are old, we perceive it is too late to live as we proposed.

PERSONS are oftentimes misled in regard to their choice of dress, by considering the beauty of colors, rather than selecting such colors as may harmonize well with their complexion and physical contour.

MIRTH.

[Under this heading we propose to publish

which "A little nonsense now and then;"
 "Is relished by the wisest men,"

A NEW PROVERB.—Blessed is the woman who compounded a pudding in silence, for she is more to be envied than she who maketh a tart reply.

HOW TO WRITE.—A greenhorn recently sent a dollar to New York to find out how to write without pen and ink. In a few days the answer came: "Write with a pencil."

A MICHIGAN man dislocated his arm the other day in putting on a clean shirt. He hadn't tried it for so long a time that he had entirely lost the "knack" of the thing.

AT a recent fireman's celebration in New Bedford, the following neat toast was proposed: "The Firemen—the army that draws water instead of blood—thanks instead of tears."

A MAN reading a newspaper a day or two since, asked a friend: "What's the meaning of the Bohemian Diet, about which we hear so much of late?" "Free lunches," was the ready reply.

A SALOON-KEEPER, having started business in a building where trunks had been made, asked a friend what he had better do with the old sign, "Trunk Factory;" "Oh," said the friend, "just change the T to D, and it will suit you exactly."

CHICAGO WIT.—A firm of painters on Madison Street bulletin their removal as follows, on a sign-board erected like a guide-board upon the ruins of their old establishment: "Moore & Goe, House and Sign Painters, removed to 111 Desplaines Street. Capital, \$100,000.30.

TOM and Arthur have been rude to their mamma. Mamma has complained to papa, who is heard coming up stairs.

Arthur—"I say, Tom, here comes papa—I shall pretend to be asleep."

Tom—"I shan't—I shall get up and put something on!"

A GENTLEMAN of a slightly irritable temper, calling out loudly for some hot water from his bed-room, was unanswered. Seizing a small bureau, he shoved it before him to the head of the stairs, and sent it whirling, end over end, to the hall below. The crash was loud enough to bring out mother, daughter, and all the servants. The head of the family was seated at the head of the stairs, elbows on knees, chin resting in hands.

"Oh, father! what is the matter?" asked the frightened daughter.

"Matter!" said the old man; "why, here I have been a callin' and callin' for very nigh on half an hour, and now I've telegraphed for yer, that's all."

SOLD.—A party of mischievous boys in the State of Michigan lately perpetrated the following practical joke: They quietly stuffed an old suit of clothes with straw and buried it in the ground; then killed a couple of chickens and sprinkled blood profusely in the vicinity of the grave and trampled the ground so as to give it the appearance of having been the scene of a terrible struggle. As they had hoped, the hurriedly made grave and the blood were discovered. Suspicions of a dreadful murder were excited. The coroner was hastily summoned, a jury impaneled, and the other preparations for an inquest made. Coroner, jury, and the crowd of expectant bystanders "acknowledged the corn" when the dummy was exhumed.

Our Mentorial Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of its early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage.

SOCIAL AMUSEMENT QUESTION.—We are most all of us members of the Church in this community, and some of our principal members are opposed to social parties. They think they are the wrong places for young Christians. Please to tell us in your next number what you think about it.

Ans. Of course we think about it as phrenologists. Normal amusement is essential to the harmonious development of brain, and to the body as the complement of the brain. In children the capacity for amusement is proportionately larger than it is in adults. The reason for this is due to the greater necessity of exercise for the development of the body and the thorough sustenance of nervous life. As a general thing, those who decry social amusement had very little of it in their youth, and therefore lack that special development of brain which is particularly related to the enjoyment of social intercourse. Such people are not cheering elements in general society. They are usually recognized as clouds. Meetings among people, young and old, for pleasant, cheerful conversation and innocent amusement, are also essential for the promotion of sympathy and kindness in a community. Everything that is baleful or noxious in social parties we seriously object to, but that there need be anything harmful or pernicious is altogether out of the question. There are so many games and modes of diversion, all of an innocently amusing nature, and some of them really instructive as well as amusing, that one need not use any of those absurd and harmful practices so rife in what is considered fashionable life.

MAY WE MARRY?—I contemplate marrying a young lady who suits me in every respect as to character, health, age, etc. But her father is a first cousin to my father, and her mother is also a first cousin to my mother. Do you think it advisable to marry under those circumstances? I am twenty-one in February, and she eighteen next March.

Ans. We can not approve, and must oppose the match. In view of the ill effects of consanguin-

ous marriages on offspring, increasing idiocy, imbecility, or other infirmities, we call on all our State Legislatures to enact laws prohibiting such marriages as are known to be inimical to the best interests of individuals, the State, and the nation. Let us at least avoid the direct means of generating subjects for asylums, hospitals, prisons, and poor-houses. To those who are infatuated, who will not reason, but are determined to consummate their desires without regard to consequences, we commend the application of cold water to the back of their heads. They need cooling off.

COLOR OF EYES AND HAIR.—Is there any way of telling for certain the color of the hair and eyes of a person when you are blindfolded? I ask because there is a person here lecturing on Phrenology who claims that he can, but will not prove it.

Ans. "Guess not." But suppose he could tell, what of it? He is not the only boastful phrenologist now before the public. Egotistical braggarts, be they old and gray, or be they beardless boys, are not to be trusted. They are quacks and impostors, who ought to be shut up for swindling.

WHO WROTE SHAKESPEARE?—It is affirmed by some that Lord Bacon wrote Shakespeare's plays. Does not the development of Bacon's head prove this assertion false?

Ans. Lord Bacon was one of the most original and powerful thinkers that England ever produced. By profession he was a lawyer, and during the greater part of his life he was intimately connected with departments of government. He published many important works, chiefly of a political character, and is usually referred to as the originator of the system of reasoning known as induction. His writings, as a class, do not exhibit much of the ideal or imaginative element. They are valued on account of their profound learning and clear, cogent, irrefutable logic. His head exhibits the characteristics of the thinker, the counselor, the logician, the metaphysician; the man who dealt with the definite; the ascertained or the ascertainable rather than with the visionary and hypothetical. Shakespeare's head shows the man of strong perceptions, and also of great ideal outreach. Shakespeare's head is relatively much broader than Bacon's, but not so much developed in the upper forward part of the forehead. Shakespeare was possessed of a stronger intuitional faculty than Bacon; and, moreover, his temperament rendered him much more susceptible to psychological impressions. Of late years there has been much discussion on the part of

some who seem inclined to doubt the authenticity of the Shakspearian account, but for our own part we can scarcely find much room in the history of the Shakspearian drama to warrant an attempt to bolster up the advocacy of any other than Shakspeare as the author of the wonderful dramas and poetic compositions which bear his name. The cotemporary literature of Shakspeare's own time is so ample and so directly in favor of his being the author, that it seems foolhardy to doubt. Francis Meres, in his "Palladis Tamia," published in 1598, when Shakspeare was but thirty-four years old, said that "the sweete wittie soul of Ovid lives in the mellifluous and honey-tongued Shakspeare; witness his 'Venus and Adonis,' his 'Lucrece,' his sugared sonnets among his private friends." Again: "As Plautus and Seneca are accounted the best for comedy and tragedy among the Latines, so Shakspeare among the English is the most excellent in both kinds for the stage." This was written by Meres before Shakspeare's greatest works appeared. Ben Jonson says, in his "Discoveries:" "I loved the man, and do honor his memory on this side of idolatry as much as any." Jonson was very intimate with Shakspeare, and, according to common report, was indebted to him for the performance of his (Jonson's) first play at the Black Friars Theater. To one who is thoroughly familiar with the literature of the Shakspearian age, it must seem singular that any attempt would be made to despoil William Shakspeare of the laurels he has so long worn. —

INQUIRER.—You should avail yourself of the services of a first-class elocutionist. A dozen lessons or more, faithfully taken and as faithfully followed, will prove of inestimable value. It is evident that your voice has not had any cultivation; at any rate that no pains have been taken to develop yourself in vocalization. Now you appreciate your deficiency, and at the same time seek to do too much in defiance of nature. —

MUSIC—MESMERISM.—When one person is in a mesmerized state, and under the control of another, can the person mesmerized be made to sing, for instance, or play a tune on any instrument, without the mesmerizer touching the so-called organ of Tune upon the head?

Ans. Yes; it is said the mesmerizer may, by an effort of his will alone, without contact with the subject, cause the subject to sing and play at will. The organs of the brain—all of them—are, no doubt, quickened and excited by mesmeric influences, whether by personal contact or by the will of the mesmerizer. —

DIFFER WITH, AND FROM.—Which is the proper mode of expression: "I beg leave to differ *with* him," or "differ *from* him?"

Ans. We differ *with* one when we quarrel; we differ *from* one when we think differently, or take a different course. When bears or cats lock jaws with each other, they differ *with* one another; but

when they take different paths for home, or employ different methods in securing their prey, they differ *from* each other. —

SHORTHAND.—What system of shorthand is called, or is really the best now in use? Do you know anything of Gray's method?

Ans. We have in our office four reporters: one writes according to Pitman; another according to Graham; another according to Munson; and they do their work well, and we are satisfied. It is claimed that Munson's is the most easily acquired; but the three mentioned are really all one system, with modifications. It is to be expected that the partisans of each system will praise the one he follows. Gray's method, which is advertised to be taught in fifteen minutes, or some such ridiculously short time, deserves no consideration whatever. It is doubtless one of the many rascally catchpennies which are advertised with the view to get the money of the unwary. So far as we can judge of the system, it has neither sense nor science. —

DEBILITATED FACULTIES.—Can the faculties which may have become impaired by disease be fully restored? If so, how?

Ans. It is doubtful whether faculties which have been injured by a long course of dissipation will ever become thoroughly re-invigorated. Men injure their memory by the use of tobacco, and appear to recover its normal use by abandoning the filthy weed. Men who have injured themselves by the use of alcoholic stimulants, or by strong coffee or tea, when they give up these things, seem to come back pretty nearly to their old standard. But we have our serious doubts whether the body or the brain which has suffered any serious illness ever thoroughly becomes as strong as before. A ship that has been strained and racked by storms may be overhauled and pass muster, but we doubt whether the loosened joints, though filled with oakum and tar, are quite as good as they were to start with. "Lead us not into temptation" is a part of the prayer which we think is better than "Deliver us from evil;" but the latter is indispensable after the former has failed. It is better to be whole, though we have scars, than to perish. —

SIZE OF HEAD.—What should be the size of an evenly balanced head, measuring thirteen inches from the opening of each ear around the eyebrows, and fourteen inches from the same points over the top of the head?

Ans. About 22½ inches in circumference.

BASHFULNESS.—Can you tell me a cure for bashfulness?

Ans. In our Annual for 1867 we printed an exhaustive article on this subject. We have published eight years' Annuals in one book, entitled "Combined Annuals," which can be had by mail, postage paid, for \$1 75. In this will be found articles on STAMMERING; JEALOUSY, its Cause and Cure; MARRIAGE OF COUSINS; MIRTHFULNESS;

FOOD FOR THINKERS AND WORKERS. We mention the above topics, because nearly every week we have questions on these subjects.

MEMORY OF ANIMALS.—Do the higher order of animals possess memory, or are their actions due to sensation and perception? For instance, a horse breaks through a bridge,—would the fear that he afterward evinces be due to memory, or to sensation and perception?

Ans. The impression was made through sensation and perception, and these are remembered, just as a man would remember them; but the horse has no reasoning power, and though the broken bridge may have been mended with new plank, he will still shy and be afraid, not having the reasoning power to know that the trouble has been obviated; while man, seeing that the damage had been repaired, though he would remember his previous disaster, would not be afraid of a similar one.

CATHERINE DE MEDICI.—This historical woman was the only child of Lorenzino de Medici, Duke of Urbino, and Madelaine de la Tour, a French princess, sister-in law of the Duke of Albany. She was born in 1519, and in 1533 married the Duke of Orleans, afterwards Henry II. of France. During her husband's lifetime the political history of Catherine possesses little interest; but after his death, in 1559, and that of her eldest son, who died in the year following, Catherine was named Regent of France during the minority of her second son, Charles IX. Among the great events which occurred during her regency, and which belong to the early history of the Reformation, were the battle of Dreux, fought between Guise and Conde in 1562; the League of Bayonne, formed against the Protestants, and the recommencement of the religious war in 1566; the battle of St. Denis and the death of Montmorency in 1567; the battle of Jarnac and assassination of Conde in 1569; the battle of Mont-Couron in 1569; the peace of St. Germain, to which Catherine submitted under the dictation of Colligni and the Protestants, in 1570; and the treacherous massacre of St. Bartholomew in 1572. She died 1589. During the fierce struggle between the Protestant and Catholic leaders, which threatened to rend the kingdom in pieces, Catherine exhibited a reckless determination to maintain the royal authority, and through her efforts the government was preserved from total anarchy. She was possessed of commanding talents, was remarkable for her ambition and the subtlety of her policy, and she had also a taste for art, which led to the formation of the grand galleries of the Tuilleries, now unhappily in ruins.

INSTINCT.—INTELLIGENCE.—Is the intelligence of the brute derived wholly from instinct?

Ans. Intelligence is one thing; instinct, another. A horse, dog, or elephant, etc., in a state of nature, is governed by instinct; but when

broken, trained, subdued, disciplined to the service of man, he is changed improved. By this training, breaking, and discipline, he is *educated*, and becomes, so far, *intelligent*. No amount of training, however, can make him other than the animal he is. You can not develop in him any new organs or faculties—such as reason, devotion, benevolence, etc. The line of demarcation between the human and the animal is clearly marked, and Phrenology shows where this line is.

What They Say.

IN the PHRENOLOGICAL JOURNAL we have an instance of what determined and resolute perseverance can do. Many years ago this journal asserted a principle for which public opinion had little or no appreciation; it, however, created a public opinion for itself, and has maintained its course, *per fas et nefas*, till its own disciples have placed its success beyond the reach of doubt. This journal is now a fact. It is the liturgy of phrenologists, the favorite of clerks, mechanics, and factory operatives. It delights, as much as ever, in the marvelous, the monstrous, and the eccentric. We are well pleased to see it very much improved of late years in its tone, style, and efficiency.—*The Christian Year*.

[Yes, it is a "fact." And it is "the favorite" of the classes mentioned, including even humble, truth-seeking fishermen, publicans, and sinners, whose interests it ever has in view. It has never played the sycophant to self-righteous Pharisees, and consequently has been rejected by not a few rich, bigoted, bad men. Its followers having visited prisoners, and endeavored to ameliorate their forlorn condition; the insane, and suggested ways and means by which their infirmity might be successfully treated; the imbecile and idiotic, and discovered methods whereby their minds and bodies may be developed, it now ventures on the higher domain, even that of the "cloth," and would touch the hearts of its wearers in favor of Christian love and unity, as opposed to sectarian schism, spleen, and rancor. The teachings of Phrenology are in keeping with the teachings of established science and true religion, and opposed to superstition, prejudice, bigotry, and all uncharitableness. Phrenology accounts for many things which have been regarded by the ignorant as mysterious, and will in good time open up to view the glories of a higher faith, a higher hope, and a higher Christian charity than is now taught in many books and pulpits, or by any craft. We thank the *Christian Year* for so much appreciation and encouragement.

P. S. Since the above was in type, we regret to learn the discontinuance of the *Christian Year*. We were informed that it commenced its existence a few months ago with 20,000 paying subscribers, which at its club-rates would amount to

\$40,000; at full rates, to \$60,000. But three numbers were issued. The public are curious to know what has become of the money, and why the magazine does not go on. An explanation is due to those who have paid in advance. There are many who are mortified and grieved at this suspension. Is there anything "rotten" in Denmark?]

A FRIEND from Missouri, E. C., writes: "I never read a number of the PHRENOLOGICAL JOURNAL but I feel encouraged and have new impulses aroused in my mind to be a better man.

"I have noticed that after a sharp contest in the game of checkers with a good player, whose management I have to watch with great care and anxiety, I have a severe pain and great heat in the region of the organ of Cautiousness, arising, as I suppose, from the over-exertion of the faculty of Cautiousness.

"Every day I get new evidences of the truth of Phrenology."

ENTHUSIASM IN VERSE. — The Fort Dodge Messenger was so delighted with our December number that it broke out into the following strain of poetic inspiration:

We owe the reader no apology
For mentioning the stores of knowledge he
Finds in the JOURNAL OF PHRENOLOGY.
Without the usual course in college, he
Can map and chart our heads,
As shale and limestone beds
Are mapped and charted in geology!
God bless great Doctor Spurzheim,
(Though thousands d—n and curse him,)
For teaching such delightful ology.
Moreover, above all,
God bless old Doctor Gall!
They should have named the science Gall-ogy.

CLEAR MANUSCRIPT. — G. F. writes very sensibly on the proprieties of authorship. He must have had some experience of the annoyances editors are subjected to. In the examination of manuscript, written in a scraggy, irregular, or blurred hand, it is true enough, as he remarks, that many a paper, ably composed in so far as the subject-matter is concerned, is thrown aside in disgust because of the difficulty met by the editor in deciphering it. Those publishers who have the interest of the reading public at heart are quite willing to consider the expressions of sympathy and suggestion which come to them occasionally from members of that public, and they are well disposed toward giving some circulation to what is aptly said by correspondents; but when upon the examination of a letter it is found that to make it suitable for the compositor's use it must be in a great measure re-written—in other words, that the editor must supply ideas and whole sentences to clear up what is vague and inconsistent in the *dictum* of the correspondent—it by no means appears unreasonable that the editor should throw aside such *dictum*. Howbeit, when there

comes into the editor's hand a subscriber's carefully-written "say;" when he can peruse the article or letter without straining his eyes, he is very cordially inclined toward that subscriber and earnestly disposed to convert to some practical use what may be of service in his communication.

Literary Notices

There is a kind of physiognomy in the titles of books no less than in the faces of men, by which a skillful observer will know as well what to expect from the one as the other. — BUTLER.

SALAD FOR THE SOLITARY AND THE SOCIAL. By an Epicure. Re-dressed and compounded. 8vo; pp. 526. Price, \$4. New York: De Witt C. Leut & Co.

This sumptuous volume is beautifully illustrated with 53 original designs by eminent American artists. Mr. Frederick Saunders, the author, has put the substance of ponderous encyclopedias into his handsome book; he has ransacked creation, and gives us the gist of his accumulations. He tells us about the talkative and the taciturn, and he gives us a Monologue on Matrimony which ought to be published in a popular book by itself. Sports and Pastimes, Last Words of the Illustrious, Mysteries of Medicine, An Interesting Talk about Trees, The Toilette and its Devotees, The Selfish and the Social, Pulpit Peculiarities, Humors of Law, Flowers, Plagiarism or the Larcenies of Literature, with Sleep and its Mysteries, and enough more to entertain the reader for days and weeks.

SPEECHES ON POLITICAL QUESTIONS. By Geo. W. Julian. With an Introduction by L. Maria Child. 8vo; pp. 472. Price, \$2. New York: Hurd & Houghton. Cambridge: Riverside Press.

Here are not only honest and earnest, but intelligent utterances. In Mr. Julian we have a high type of the American scholar, statesman, and gentleman. He is modest, though self-relying; he is earnest, because sincere. Among other topics discussed in this handsome volume, we have the Spoilation of the Public Domain, with the Saving Remedy, Impolicy of Land Bounties, The Homestead Law Defended, How to Resume Specie Payments, etc. There are model speeches here which young orators and legislators would do well to carefully peruse.

DOGS AND THEIR DOINGS. By the Rev. F. O. Morris, B.A., author of "A History of British Birds," "Natural History of the Bible," etc. Small 4to; pp. 184. Price, \$1 75 New York: Harper & Brothers.

Personally, we consider dogs a nuisance; and when we see them taking the places which ought to be given to children, we feel indignant. Look at that portly maiden lady of fifty years spending half her time, with no little of her money, on a poodle which, trained to tricks and educated as

highly as possible, is only a poodle, and can become nothing more than a poodle. Again, consider the millions of dollars' worth of useful sheep killed every year by useless curs (\$7,000,000). Then we have mad dogs, who bite not only other animals, but human beings as well; and oh, the horrors of such a death from hydrophobia! The book before us gives the other side of the dog question. It relates many facts showing the great sagacity of the dog; his faithfulness, his sociability, his bravery, pluck, and courage, and is exquisitely illustrated with the portraits of more than twenty historical dogs. It is one of the most charming books of the season.

A TREATISE ON ENGLISH PUNCTUATION.

Designed for Letter-writers, Authors, Printers, and Correctors of the Press, and for the use of Schools and Academies. With an Appendix, containing rules on the use of capitals, a list of abbreviations, hints on the preparation of copy and on proof-reading, specimens of proof-sheet, etc. By John Wilson. Twentieth edition. \$2. Woolworth, Ainsworth & Co., 55 John Street, New York; 111 State Street, Chicago.

We can not do better than repeat what we wrote of this book twenty years ago when noticing a former edition; "A work which should be in the possession of every student who aspires even to write a letter. It is a perfect guide in all matters covered by the title." Since then, the work has been greatly enlarged and very much improved.

JAPAN IN OUR DAY. Compiled and arranged by Bayard Taylor. 12mo; pp. 280. Price, \$1 50. New York: Charles Scribner & Co.

This once hidden empire is now opening its ports to the world. Civilization is too much for it. Mr. Taylor gives us the most lucid description of that country yet published; its geography, natural history, agriculture, arts, and industries; tells us about their social relations, marriage, education, religion, how they cook, how and what they eat, and how they dress; also, something of their festivities, funerals, theaters, gymnastic exercises, schools, and commerce. In short, he tells us the story of Japan life in his usual felicitous style. The book is amply illustrated by many full-page engravings, pictured to the life.

THE WONDERS OF WATER. From the French of Tissaudier. Edited with numerous additions by Schele de Vere, D.D., LL.D., of the University of Virginia, author of "Studies in English," "Americanisms," etc. With sixty-four illustrations. 12mo; pp. 350. Price, \$1 50. New York: Chas. Scribner & Co.

Here is science, history, geography, natural history, and something of everything relating to water. In his glance at the ocean, the author tells us of its extent, its color, its depth, and its temperature. He tells us all about tides and the currents; also, the system of circulation, the action of water on continents, the physical and chemical properties of water, as well as its uses. The book is superbly published, and will make one not only willing but desirous to possess it.

GENTLE MEASURES IN THE MANAGEMENT AND TRAINING OF THE YOUNG, or The Principles on which a firm, yet gentle Parental Authority may be Maintained, and the Moral and Mental Capacities of Children properly Developed. By Jacob Abbott, author of "Science for the Young," etc. 12mo; pp. 330. Price, \$1 50. New York: Harper & Brothers.

The author does not hold to the Old Testament doctrine of "sparing the rod and spoiling the child," or rather, we should say, to its literal or physical interpretation. He points out a better way, for which let us be duly thankful. To all who can not govern without flogging, we commend a perusal of these "Gentle Measures."

WOMAN'S WORTH AND WORTHLESSNESS.

The complement to "A New Atmosphere." By Gail Hamilton. 12mo; pp. 291. Price, \$1 75. New York: Harper & Brothers.

Here are some of the headings under which our author writes: The State of Nature, The State of (French) Grace, Falling from Grace, Pursuit of the Forty Thousand, Things Needed and Things Wanted, Women among the Prophets, Disabilities, Serfdom, Servile Occupations, Home Yearnings, Female Sagacity in Politics, Press Work, Representative Reform, The Necessity of Female Suffrage, Exemption or Imposition, The Attitude of Men, Results,—all of which are treated in her usually spirited style.

A NOBLE WOMAN. By Mrs. Ann S. Stephens, author of "Palaces and Prisons," etc. 12mo; pp. 479. Price, \$1 75 in cloth, or \$1 50 in paper cover. Philadelphia: T. B. Peterson & Bros.

Mrs. Stephens gives us here her model or ideal woman—of course, she describes her in a story. All the ups and downs of life, all the trials and triumphs incident to a struggling spirit, are depicted in the author's most vivid and vigorous style, and her book will meet a hearty response from many readers.

THE OLD BACK ROOM. By Jennie Harrison, author of "On the Ferry Boat," etc. 12mo; pp. 392. Price, \$1 50. New York: Dodd & Mead.

Here are the reminiscences of a close observer, and the reader will find among them such stories of interest and experience as will serve to while away a pleasant hour.

VIEW OF THE STATE OF EUROPE DURING THE MIDDLE AGES. By Henry Hallam, LL.D., F.R.A.S. Adapted to the use of Students by William Smith, D.C.L., LL.D. 12mo; pp. 708. Price, \$2. New York: Harper & Brothers.

This is from the latest edition of the author's work, and embodies all his additions and improvements. The editor has added to the chapter on the Constitutional History of England various original documents, which will be of great service to the student. Among these are the Statutes of William the Conqueror, the Charter of Liberties of Henry I., the Constitutions of Clarendon, the Magna Charta, etc. It is, in all respects, the most complete work of the kind in print.

THE HYGIENIC HAND-BOOK. A Practical Guide for the Sick Room, with Appendix. By R. T. Trall, author of "Hydropathic Encyclopedia," "Family Gymnasium," "Cook-book," etc. 12mo; pp. 300. Price, \$2. New York: Samuel R. Wells.

A new and revised edition of this convenient hand-book has just been published. It has been some time out of print. Those who would know how to treat the various ills which flesh is heir to, without drugs or other medicines, may find ample directions here.

THE RIGHT ONE. By Marie Sophie Schwartz. Translated from the Swedish by Selma Borg and Marie A. Brown. 8vo; pp. 313. Price, \$1 in paper; \$1 50 in cloth. Boston: Lee & Shephard. New York: Lee, Shephard & Dillingham.

If a universal reading of this excellent author would displace the tone of trash now issuing from our press, we could say God-speed, for, besides real entertainment, the reader would obtain real instruction, with a quickening of his moral sense as well. The tendency is always in the right direction, and the reader is the better for the reading.

RESOURCES OF KANSAS. Fifteen Years' Experience. By C. C. Hutchinson. With a new map and 40 illustrations. 18mo; pp. 287. Price, \$1; in muslin, \$1 50. Topeka, Kansas: C. C. Hutchinson.

Indorsed by the leading men of the State, including members of its Legislature, as well as by the press generally, this may be taken as the standard hand-book of this thrifty young State. Prospective settlers should secure a copy, and inform themselves in regard to its geography, geology, natural history, its agriculture, its water power, and other interests.

HAND-BOOK OF COLORADO. Containing a Directory of Places and Routes, Statistics of Population and Facts about Climate, Colonization, Mining, Farming, Stock Raising, etc. 18mo; pp. 88. Price, 30 cents. Denver: J. A. Blake.

Those who would know something of this new Territory may get a brief outline in this little pocket hand-book. It is neatly printed, worthy the imprint of the Riverside Press.

PUTNAM'S HANDY BOOK SERIES.—"Eating and Drinking." A Popular Manual of Food and Diet in Health and Disease. By Geo. M. Beard, M.D. 12mo; pp. 180. Price, paper, 50 cents. New York: G. P. Putnam & Sons.

"STIMULANTS AND NARCOTICS MEDICALLY, PHILOSOPHICALLY, AND MORALLY CONSIDERED. By Geo. M. Beard, M.D. 12mo; pp. 155. Price, paper, 50 cents. New York: G. P. Putnam & Sons.

Suggestive, but not exhaustive. This young author is evidently aiming at fame and fortune. He is more profligate than profound. In short, he is simply a book-maker, and the world will be not much the wiser for the books he makes. The publishers have done their part, as usual, in an admirable manner.

HANNAH. By the Author of "John Halifax, Gentleman," "A Brave Lady," "Agatha's Husband," etc. 12mo; pp. 310. Price, \$1 50. New York: Harper & Brothers.

This lady has written so much and so well that it is only necessary to give title, with name and price, to secure many readers.

WOMAN'S PROFESSION AS MOTHER AND EDUCATOR. With Views in Opposition to Woman Suffrage. By Catherine E. Beecher. 12mo; pp. 228. Price, \$1 25. New York: S. R. Wells.

The name of Miss Beecher will command respect everywhere. She is thoroughly educated, thoughtful—nay, profound; and her words have weight with many. Still, it does not follow that the world will adopt her teachings in regard to Woman's Suffrage. We hope all who can will read her work.

FANCHON, THE CRICKET; or, "La Petite Fadette." By George Sand, author of "Consuelo," "The Countess of Rudolstadt," etc. 12mo; pp. 230. Price, \$1 50 in morocco cloth, gilt; in paper cover, \$1. Philadelphia: T. B. Peterson & Brothers.

A curious book, full of wonder-loving stories, bordering on the mysterious, and developing a love for the marvelous and the superstitious. Believers in witchcraft will believe in this.

THEORY AND PRACTICE OF ELECTRICAL THERAPEUTICS, or Electricity as a Curative Agent. By Albert J. Steele, M.E. 12mo; pp. 192. Price, \$2. New York: American News Co.

The author gives his experiences in this new mode of practice. It is intended rather for professional than for popular use.

THE AUGUST STORIES—August and Elvie. By Jacob Abbott, author of "The Rollo Books," "The Juno Stories," etc. 12mo; pp. 388. Price, \$1 50. New York: Dodd & Mead.

Like other productions of this author, this will doubtless prove popular. It is handsomely published, presenting a very inviting appearance.

TEACHER'S GUIDE. Companion to Bartholomew's Drawing-book No. 1. For Teachers and Students using Bartholomew's Drawing-books. By W. N. Bartholomew, Professor of Drawing in the English High and Boston Normal Schools. Revised edition. 18mo; pp. 84. Price, 25 cents. New York: Woolworth, Ainsworth & Co. Commendable.

DISEASES OF WOMEN: Their Causes, Prevention, and Radical Cure. By Geo. H. Taylor, M.D. 12mo; pp. 318. Price, \$2. New York: S. R. Wells.

Dr. Taylor is one of our sound and sensible hygienic physicians. He has never dabbled in drugs, although a graduate of a regular allopathic school. He is well known as the author of a work on the "Movement-Cure," and another on "Paralysis." This work, "Diseases of Women," may be obtained at this office.

ELEMENTARY MUSIC READER. By B. Jepson, Teacher of Music in the Public Schools of New Haven. 12mo; pp. 68. Price, 60 cents. New Haven, Conn.: Chas. C. Chatfield & Co.

Precisely what its title indicates; the work will aid beginners, and tend to develop the musical faculties in those who exercise them. Messrs. Chatfield & Co. have displayed excellent taste, as well in this as in their other useful publications.

THE YOUNG DODGE CLUB. Among the Brigands. By Prof. James De Mille, author of "The B. O. W. C.," "The Boys of Grand Pré School," etc. Illustrated. 18mo; pp. 328. Price, \$1 50. Boston: Lee & Shephard. New York: Lee, Shephard & Dillingham.

Like Oliver Optic, Professor De Mille understands boys, their natures, likes and dislikes, and his *Life Among the Brigands* will cause the heart of many a youth to throb with fear and fun.

THE WHISPERING PINE SERIES. The Sophomores of Radcliffe, or James Trafton and his Bosom Friends. By Elijah Kellogg, author of "Lion Ben of Elm Island," "Charlie Bell, the Waif of Elm Island," etc. Illustrated. 18mo; pp. 281. Boston: Lee & Shephard; New York: Lee, Shephard & Dillingham. \$1 25 a volume.

The author's name, with the title of his book, is enough to secure readers. He depicts the life and experience of a student in his course through the school. Many useful suggestions are given by which to make student-life somewhat less hazardous and more endurable.

THE COUNTRY OF THE DWARFS. By Paul du Chaillu. With numerous Engravings. 12mo; pp. 314. Price, \$1 75. New York: Harper & Bros.

Whatever of fact, or whatever of fancy this author puts into his books, certain it is that he interests his readers, and his publishers obtain an extensive sale for his productions. This will be no exception. Liberally illustrated with striking pictures, it will be welcomed everywhere by youth and adult.

LITTLE PRUDY'S FLYAWAY SERIES.—Aunt Madge's Story. Illustrated. 18mo; pp. 214. Price, \$2 25. Boston and New York: Lee & Shephard.

It is through talking and story telling that little children are entertained and instructed. Aunt Madge understands the art and knows how to apply it.

BARNETT'S PATENT PARLOR GYMNASIUM, and Chest Expander. For School and Families; for the young, old, and middle-aged; for the narrow-chested; for the round-shouldered; for persons afflicted with spinal distortions; for dyspeptics; for ladies sitting at the sewing machine, and all persons engaged in sedentary employment. With illustrations from life by S. M. Barnett, M.D. 12mo; pp. 120. Price, \$1. New York: J. Becker & Co.

This book is a description of the exercises to be performed with the Chest Expander, an india-rubber strap with handles, the stretching of which during the exercises acts on the muscles.

THE DOCTOR'S DAUGHTER. By Sophie May, author of "Little Prudy Stories," etc. 18mo; pp. 330. Price, \$1 50. Boston: Lee & Shephard. New York: Lee, Shephard & Dillingham.

Simply the experience of a young lady from girlhood up, told by a sympathetic woman "who knows how it is herself." Sophie May is a racy writer, and seems to be growing in public favor, especially with the young folks.

SERVING OUR GENERATION, and God's Guidance in Youth. Two Sermons preached in the College Chapel, Yale College, by President Woolsey. 12mo; pp. 51. Price, \$1 25. New Haven, Conn.: Chas. C. Chatfield & Co.

The utterances of a wise, kindly, and godly man. Let the world read and heed his teachings.

THE AMERICAN HOME-BOOK OF INDOOR GAMES, AMUSEMENTS, AND OCCUPATIONS. By Mrs. Caroline L. Smith (Aunt Carrie). Illustrated. 12mo; pp. 380. Price, \$1 50. Boston: Lee & Shephard. New York: Lee, Shephard & Dillingham.

Here are games for old and young. Natural magic, jugglery, ventriloquism, house and home arts, and lots of things which all boys and girls will be delighted to know.

ÆSTHETICS; or, THE SCIENCE OF BEAUTY. By John Bascom, Professor in Williams College. 12mo; pp. 268. New York and Chicago: Woolworth, Ainsworth & Co.

A series of sixteen interesting lectures relating to all the external means by which to beautify and perfect the character; besides, modern houses, homes, schools, churches, occupations, etc., are well considered, and the views eloquently expressed.

LITTLE PIECES FOR LITTLE SPEAKERS: A Collection of Poetry designed to assist Parents and Teachers in preparing for Exhibitions. By Miss S. M. Priest. 18mo; pp. 240. Price, 60 cts. Boston: Lee & Shephard. New York: Lee, Shephard & Dillingham.

The best thing of its kind, and must prove acceptable to many.

THE MODEL SUNDAY SCHOOL SPEAKER: A Collection of Dialogues, Addresses, etc., for Exhibitions, Monthly Concerts, and Anniversaries. By Anna Monroe. 18mo; pp. 128. Price, \$2. Boston: Lee & Shephard. New York: Lee, Shephard & Dillingham.

Like the Young Man's Ready Letter Writer, this "Sunday School Speaker" will assist all who are fortunate enough to avail themselves of its teachings.

HALF-HOURS WITH MODERN SCIENTISTS—Huxley, Barker, Stirling, Cope, Tyndall. 12mo. New Haven, Conn.: Charles C. Chatfield & Co. Price, \$1 50.

We have here the several productions of these famous authors on the physical basis of life, including the correlation of vital and physical forces, protoplasm, evolution, heat and dust, the scientific uses of the imagination, etc., in a handsome plump volume. Price, \$1 50.

FIRESIDE SCIENCE: A Series of Popular Scientific Essays upon Subjects connected with Every-day Life. By Jas. R. Nicols, A.M., M.D., author of "Chemistry of the Farm and the Sea," and editor of "Boston Journal of Chemistry." 12mo; pp. 283. Price, \$1 50. New York: Hurd & Houghton. Cambridge: Riverside Press.

To give the chemistry of a hen's egg and of a cigar, of kerosene and a lump of sugar; also of the human body, of food, plants, etc., is one of the features of this excellent work. It is just such a work as every young person ought to read; he will live better and longer for reading and heeding its teachings.

THE NATIONAL CHORUS BOOK: A Choice Collection of Oratorio and Opera Choruses, Glees, etc., designed for the use of Musical Conventions and Singing Associations. Compiled by L. O. Emerson. Large 8vo; pp. 203. Boston: Oliver Ditson & Co.

Mr. Emerson has made himself popular and acceptable as a composer of both sacred and secular music; he has produced such a work in this as must prove useful to the profession.

THE MUSICAL TREASURE: A Collection of Vocal and Instrumental Music for the Piano-forte or Reed Organ. 4to; pp. 224. Price, Boston: Oliver Ditson & Co.

We have here 64 vocal and 53 instrumental pieces of first-class music, from such authors as Handel, Dr. L. Mason, Emerson, Howard Paul, Hullah, Strauss, etc. This old and extensive house publishes only the best musical works.

HALF-HOUR RECREATIONS IN POPULAR SCIENCE. No. 1. Strange Discoveries respecting the Aurora, and recent Solar Researches. By Richard A. Proctor, B.A., F.R.A.S., author of "The Sun." 52 cts. Boston: Lee & Shephard.

A good beginning; let the work go on. "Light, light, more light" is what the world wants.

MESSRS. ORANGE JUDD & Co. publish the "Hoosier Schoolmaster," by Edward Eggleston, in book form, at \$1 50. Republished from *Hearth and Home*, where it was so popular.

DURNTON ABBEY. A Novel. By T. A. Trollope. Pamphlet. 175 pp. Price, 50 cents. Harper & Brothers.

This is No. 367 of the Library of Select Novels.

OLIVER OPTIC, not satisfied with going around the world with his boys and girls—in his magazine—now comes out with a splendid pictorial almanac for 1872, in the interest of young folks. 30 cents.

COMPENDIOUS GRAMMAR OF THE GREEK LANGUAGE. By Alpheus Crosby, Professor Emeritus of the Greek Language and Literature in Dartmouth College. 12mo; pp. 370. Price, \$2. New York and Chicago: Woolworth, Ainsworth & Co.

Students in Greek will find this a special aid in their studies; it is clear and concise, though sufficiently elaborate for the purposes it is intended to accomplish.

BEAUTIFUL SNOW, and Other Poems. By J. W. Watson. New and enlarged Edition. Small 8vo; pp. 126. Price, \$2. Philadelphia: T. B. Peterson & Bros.

The publishers have done their part well in bringing out these beautiful poems. Besides "Beautiful Snow," there are upward of twenty others, all of merit.

WORK AND PLAY ANNUAL of Home Amusements and Social Sports, for 1872. Price, 15 cts. Milton, Bradley & Co., Springfield, Mass. It describes all the popular household games and sports, and tells where to find the materials.

MESSRS. T. B. PETERSON, of Philadelphia, have just published the following:

MONSIEUR ANTOINE. By George Sand. 8mo pamphlet; pp. 228. Price, 75 cents.

ROSE FOSTER; or the Second Series of the Mysteries of the Court of London. By Geo. W. Reynolds. 8mo pamphlet; pp. 551. Price, \$1 50.

KATE O'DONOGHUE. By Charles Lever. 8mo pamphlet; pp. 158. Price, 75 cents.

CYRILLA; or The Mysterious Engagement. By the Baroness Tautphœus. 8mo pamphlet; pp. 214. Price, 75 cents.

KATE KENNEDY. By Mrs. C. J. Newby. 8mo pamphlet; pp. 114. Price, 50 cents.

THE LIFE OF BILLY VIDKINS. Being Illustrations of the Poets, with 33 Illustrations engraved from original designs drawn by Henry H. Stephens. Small 4to; pp. 32. Price, 25 cents.

TWO LEGENDS OF THE CHRIST-CHILD. For Christmas Tide. Small quarto; illustrated, and an illuminated cover. Price, 60 cts. New York: De Witt C. Lent & Co.

A worthy tribute to the exalted subject. Though intended specially for the Christmas season, it is a suitable gift for children at all times.

THE NATIONAL ENCYCLOPEDIA. A Compendium of Universal Information, brought down to the year 1871; with the pronunciation of every term and proper name. By L. Colange, LL.D., Editor of Zett's popular Encyclopedia. To be illustrated with 500 wood-cuts, and complete in 18 semi-monthly numbers, at 40 cents each. New York: Francis B. Felt & Co.

The first number of this splendid work—56 octavo pages—is issued, and fulfills all the promises of editor and publishers. It promises to be the cheapest and most convenient work of the sort.

THE OLD FRANKLIN ALMANAC, No. 13, for 1872. 8vo; pp. 60. Price, 20 cents. Philadelphia: A. Winch.

Full of the most useful and interesting statistics connected with our country. Let everybody obtain a copy.

CONVERSATIONS ON THE BIBLE. Held at the Young Men's Christian Association, N. Y. By Prof. W. H. Thomson, M.D. In a series of Tracts. Prices, 15 cents for the first; 10 cents each for the rest.

We have here science and religion combined in a series of discourses or conversations by a Christian scholar and gentleman. Here is real information.

THE PHRENOLOGICAL JOURNAL AND LIFE ILLUSTRATED.

VOL. LIV.—No. 3.]

March, 1872.

[WHOLE No. 398.]



GEORGE H. WILLIAMS,

ATTORNEY-GENERAL OF THE UNITED STATES.

MR. WILLIAMS has a temperament of that quality which imparts clearness and intensity to his talents and emotions. His mental as

well as his physical life may be regarded as compact, rather than coarse and superficial. He centralizes his thoughts and feelings, and is capable of

discharging from his mind all considerations which do not really belong to the subject in hand. His own man, he is able to hold the current of his thoughts and actions within his own power. He is not much preyed upon by external influences; is more like the oak which meets the breeze without succumbing to it, than like the willow which blindly surrenders everything but its bare hold upon the earth. He moves among men with a quiet, persistent, yet modest, self-control; wastes no strength in display or in threats; burns no blank cartridges, but husbans his resources and controls his forces well. He would feel displeasure and disgust with reference to the conduct and character of those around him, but if it were for the interest of his cause to respond in any way to such surroundings, he would carry himself almost as much isolated from those influences as an india-rubber ball floating on a stream, being in it, but not of it. His intellectual development seems harmonious and co-ordinate, all the faculties working with equal tension and in unison. He is not a broad, dry, abstract reasoner, but one who reaches practical results on common-sense principles with a kind of easy intuition, and seldom has occasion to modify his first judgment. When he has studied and digested the principles involved, they become a part of himself, so that he does not have to labor in detail upon them, but rises above them, and, as it were, takes a bird's-eye view of the whole. He sometimes reaches conclusions which are just, yet subject him to severe criticism, and when called upon for an explanation, he has to give the subject some study to trace it back to first principles.

He is naturally critical; makes sharp distinctions, and sometimes provokes careless thinkers by insisting on the specific points which he makes. He uses terms with accuracy; prunes and

sifts his subject, excluding all extrinsic matters. His memory is very retentive, and his intellectual conclusions bear more the impress of intuitive common sense than of hard logic. In examining subjects for his own satisfaction, he does not follow ordinary logical rules, certainly not their formularies, but takes a cross-cut way, bearing about the same relation to ordinary thinking as algebra does to the longer forms of arithmetic; hence it is that men of sound, practical judgment, without his clear-sighted intuition, often feel inclined, at first, to criticise his assertions unfavorably.

He reads character well; measures men at a glance, and seldom mistakes his man. If men have excellences, he will appreciate them, although those excellences may be hidden by a rough garb and want of culture.

His language is compact, critical, definite, precise; not affluent, unless all his powers are wrought up and culminate in expression. His head, which is very high when the circumference is considered, indicates steadfastness amounting almost to obstinacy, integrity, moral purpose, reverence for whatever is sacred and venerable, and large Benevolence.

His sympathies are quick, and his Conscientiousness and Firmness are such as to give him unbending and unquestioned probity. His social nature, judging from the features, is cordial and strong, but select and special in its action. He is inclined to have but few personal friends in a court or legislature, in a society or neighborhood; but those who are admitted within that circle would speak emphatically respecting his cordial sociability. Others may think him dry, distant, curt, and unsocial. His dignity and ambition give him respect for himself and for public sentiment, and aspiration for success in effort, while his steadfastness of purpose and determination of character, together with that

concentrated intelligence which we have already alluded to, lead him to press onward and upward without noise or clamor, making sure footing at every step. We judge that he takes his intellect and moral feelings from his mother, while his force, determination, and will-power are derived from the masculine side.

—o—

ATTORNEY-GENERAL WILLIAMS is a native of Columbia County, N. Y., and was born about the year 1820. In 1844 he went to Iowa, where he commenced the practice of his chosen profession, the law. In this he made rapid advancement, and early attained an eminent position, being made a judge in 1847. This responsible office he occupied five years, when, in 1853, he was appointed Chief-Justice of Oregon, and exercised the function of that position under the Presidency of Mr. Pierce and during a part of Buchanan's administration. Resigning, he was elected to the Senate of the United States by the Oregon Legislature, and took his seat in 1865. It will be remembered that he acted a somewhat prominent part as a member of the High Joint Commission which convened for the consideration of the "Alabama Claims" in the spring of 1871. His recent appointment to the Attorney-Generalship, which was made vacant by the resignation of Mr. Ackerman, has met with very general acceptance, as he is a gentleman of superior native talent and fine culture, and in his career as a judge and a statesman has exhibited sound discretion and staunch integrity.

A few days after Mr. Williams' appointment several gentlemen from the Pacific coast called upon him at his hotel and tendered their congratulations. In response the new Attorney-General spoke in the following off-hand and characteristic manner:

"Gentlemen, allow me to make my acknowledgments for the expressions of kindness just made, and to say that I feel highly complimented by your presence this evening. I perceive that most of you reside upon the Pacific coast, and I presume that by this meeting you intend to signify your satisfaction that one of your citizens has been called to a place in President Grant's Cabinet. I accept the position with diffidence, but to the best of my abilities I shall discharge its duties so as to promote the true interests of the country, and reflect credit upon the present Administration. All the abilities and energies which I possess I shall

devote to the enforcement of the laws and the suppression of violence, disorder, and crime. I promise all whom it may concern that when I am placed at the head of the Department of Justice in this Government, so far as the jurisdiction of that department may go, its mandates will be dispensed without fear or favor, and with equal vigor and respect for all classes and conditions of men. I know not what may be in the clamor now made about official delinquencies in Federal office, but so far as the exposure and prosecution of such delinquencies devolve upon the Department of Justice, no partisan consideration will have weight, and no pains will be spared to bring the guilty to speedy and condign punishment. I deeply regret that in some portions of the country a spirit of lawlessness seems to prevail. I will favor every consideration of kindness to induce obedience to the laws, but if no other means will answer, then I am for using the whole power of the country in the most vigorous and effective manner to crush out every conspiracy against the peace of society and the safety of the unoffending citizens. Governments were primarily established to protect the weak against the strong, and if this Government fails to perform its functions in that respect, it has a poor claim upon the support and loyalty of its citizens. I am amazed that any considerable number of persons in the country at this time should engage in acts of violence and disorder, for there is nothing to be gained and much to be lost, in that way. Life without safety to person and property, and society without good order and peace, are comparatively of little value, but if the passions of hatred and revenge are allowed to overcome these considerations, then it becomes the plain duty of the Government to interpose with its strong arm, to subdue and repress those passions. No one, in the light of recent events in New York and elsewhere, can take office now and escape the vigilant eye of the people, and nothing but active and upright devotion to duty will give general satisfaction. I shall struggle to meet the popular demand, as well as to meet the expectations of my friends, with how much of success time and events will determine. I have the honor to be the first Cabinet officer taken from the Pacific coast. California, Nevada, Oregon, and the Territories of the Far West may now consider themselves recognized and represented in every branch of the Government. I feel a pride in their growth and development, and I shall not forget, in my new office, where my home is, or what I have learned of their wants and interests by a residence of twenty-seven years on the sunset side of the Mississippi River. I do not affect indifference to party matters because I have been elected to office. I belong to the Republican party. I believe in its principles and politics. I have a profound conviction that its ascendancy, for some time to come, is necessary to the preservation of peace and the enforcement of law, and subor-

dinate to my official obligations. Everything that I can reasonably, and honorably, I shall do to secure its triumph at the next Presidential election. I thank you, gentlemen, for this pleasant interview."

LORD BROUGHAM'S GHOST.

IN the recently published "Autobiography of Lord Brougham," the following singular occurrence is related:

"Tired with the cold of yesterday, I was glad to take the advantage of a hot bath before I turned in. And here a most remarkable thing happened to me—so remarkable that I must tell the story from the beginning. After I left the High School, I went with G—, my most intimate friend, to attend the classes in the University. There was no divinity class, but frequently in our walks we discussed and speculated upon many grave subjects, among others on the immortality of the soul and on a future state. This question, and the possibility, I will not say of ghosts walking, but of the dead appearing to the living, were subjects of much speculation; and we actually committed the folly of drawing up an agreement, written with our blood, that whichever of us died the first should appear to the other, and thus solve any doubts we had entertained of the 'life after death.' And after we had finished our classes at the college, G— went to India, having got an appointment there in the civil service. He seldom wrote to me, and after the lapse of a few years I had almost forgotten him; moreover, his family having little connection with Edinburgh, I seldom saw or heard anything of them, or of him through them, so that all the school-boy intimacy had died out, and I had nearly forgotten his existence. I had taken, as I have said, a warm bath; and while lying in it and enjoying the comfort of the heat, after the late freezing I had undergone, I turned my head around, looking toward the chair on which I deposited my clothes, as I was about to get up out of the bath. On the chair sat G—, looking calmly at me. How I got out of the bath I know not; but on recovering my senses I found myself sprawling on the floor. The apparition, or whatever it was that had taken the likeness of G—, had disappeared. This vision produced such a shock that I had no

inclination to talk about it, even to Stuart; but the impression it made upon me was too vivid to be easily forgotten, and so strongly was I affected by it that I have written down the whole history, with the date, 19th December, and all the particulars as they are now fresh before me. No doubt I had fallen asleep; and that the appearance presented so distinctly to my eyes was a dream, I can not for a moment doubt; yet for years I had no communication with G—, nor had there been anything to recall him to my recollection; nothing had taken place during our Swedish travels either connected with G—, or with India, or with anything relating to him, or to any member of his family. I recollected quickly enough our old discussion, and the bargain we had made. I could not discharge from my mind the impression that G— must have died, and that his appearance to me was to be received by me as proof of a future state; yet all the while I felt convinced that the whole was a dream; and so painfully vivid and so unfading was the impression that I could not bring myself to talk of it or to make the slightest allusion to it. I finished dressing, and as we had agreed to make an early start, I was ready by six o'clock, the hour of our early breakfast."

The sequel to the above, recorded more than sixty years after the blood-written compact was made, runs thus:

"*Brougham, Oct. 16, 1862.*—I have just been copying out from my journal the account of this strange dream: *Certissima mortis imago!* And now to finish the story, begun above sixty years since. Soon after my return from Edinburgh, there arrived a letter from India announcing G.'s death, and stating that he had died on the 19th of December! Singular coincidence! Yet when one reflects on the vast number of dreams which night after night pass through our brains, the number of coincidences are perhaps fewer and less remarkable than a fair calculation of character would warrant us to expect. Nor is it surprising, considering the variety of our thoughts in sleep, and that they all bear some analogy to the affairs of life, that a dream should sometimes coincide with a contemporaneous or even with a future event. This is not much more wonderful than that a person, whom we had no reason to expect, should

appear to us at the very moment when we had been thinking or speaking of him. So common is this, that it has for ages grown into the proverb: "Speak of the devil," etc.

The great critic, lawyer, and statesman, it will be perceived, undertook by reason to dissipate the spiritual conclusion of the divinity that stirred within him; but he could

not discharge from his mind the impression that his friend had died, and that his appearance was to be accepted as proof of a future state. He tried to convince himself that it was all a dream, yet his interior consciousness persistently accepted the impression as one of the realities of the outer infinite—a proof of existence in the limitless Beyond.

HOW THE DIFFERENT FACULTIES COMBINE.—No. 2.

IF Acquisitiveness becomes roused with reference to the acquisition of property, it arouses its neighbor faculties to act in conjunction with it in various ways. It excites Secretiveness when policy and concealment constitute the best means for gratifying the love of gain; it excites Constructiveness to make inventions, to work out results by mechanical means; it excites Combativeness and Destructiveness to give energy and industry and force. Some men who have more Combativeness and Destructiveness than of Constructiveness and reasoning power, will seek hard work as a source of success, and, as it were, hammer out their living by heavy blows. One who has less Combativeness and Destructiveness will seek mechanical means by which to do his work. He will use the horse-power and the steam-power, he will use tools and machinery; while another will work by hand and secure success by the hardest personal labor. Acquisitiveness excites Cautiousness in the direction of economy, of saving, and preserving. Cautiousness being excited from any cause will arouse its neighbors to action; as Combativeness and Cautiousness lie side by side, they play into each other's hands. As the pugilist holds one arm for defense and the other for striking, so Cautiousness and Combativeness, which inspire this mode of fighting, aid each other in many ways. Many a man fights through fear. The self-defensive severity which sometimes is manifested even to the taking of life, originates in fear. Cautiousness is the central element; Combativeness and Destructiveness, and perhaps Secretiveness added, deal the deadly blow to the aggressor, and, as courts say, "served him right." Cautiousness excites Acquisitiveness; the fear of poverty in old age, the fear of privation, and the

inconveniences and dangers of poverty do much to inspire Acquisitiveness, and even ingenuity and planning intellect, to provide for the future. Cautiousness excites the intellect to action to discover the ways and means to obtain security against danger. Caution says Defend, Intellect plans defenses; while Combativeness and Destructiveness, or Constructiveness or Acquisitiveness, may work out defense according to the character of the danger.

Let Approbativeness be considered the leader in a course of action, what will it excite? If it be a question of disgrace, censure, calumny, and the disadvantages arising therefrom, as Caution and Approbativeness lie together, how natural it is that fear should be awakened! One's anxiety about reputation is painful. How quick does Combativeness arouse when one's good name is assailed! How sensitively fearful are many people lest their reputation should be called in question! They will stand almost any amount of blackmailing, or in other ways suffer deeply in pocket to protect their reputation. Adhesiveness or Friendship is located adjoining Approbativeness. How one values the good opinion of his friends! Many a man would do wrong but for the disgrace which he would bring upon his friends; his desire to have their good opinion leads him to self-denial. Approbativeness excites Secretiveness to make plausible apologies and explanations, to conceal defects and guard the reputation from damage. Approbativeness sometimes excites Conscientiousness. Many a person would do wrong in spite of an average Conscientiousness if large Approbativeness did not burn with pungent disgrace in view of wrong-doing; and sometimes genuine remorse, arising from excited Conscientiousness, is the result

of a sense of disgrace through wounded Approbativeness, the painful action of which stirs up Conscientiousness. Moreover, Self-Esteem, the neighbor of Approbativeness, is often aroused by the excitement of the former. Those who desire to stand high in the esteem of others need a good degree of Self-Esteem, to impart the requisite dignity to command the respect of others. The fear of disgrace, therefore, often leads people to brace up their Self-Esteem grandly, so that they would say, "Is thy servant a dog that he should do this thing?"

When Amativeness and Conjugal Love are excited, all the other social elements wake up. How Combativeness and Destructiveness come into spontaneous activity in conjunction with the love-element, especially in animals, for instance, the chief part of whose fighting is done under the impetus of those feelings! We remember, when dueling was more common than now, it was usual to say in the papers, "There was a lady in the case." Among the uncultivated in our cities it is not uncommon to have fights and rows at their balls, sexual jealousy, of course, with wounded Approbativeness and Self-Esteem, perhaps, being the cause. The same men would go on a target excursion and become more intoxicated than at the ball, but there would be no fighting. Probably the most serious animosities which arise among men or women originate in the rivalries of love matters and in the jealousies growing out of them. Parental love is excited also by Amativeness; so is Inhabitiveness, or love of home. Many a young man is careless of his time, squanders his money, lays up nothing, makes no provision for the future, until his love-nature is excited; then the thought of wife, child, home, and friends, as related to home associations, stimulates his Caution with a view of future want, and his Acquisitiveness with a view to supply those wants, and he avoids expensive entertainments and keeps out of company, hides his money away in the savings bank, and thus is every way improved in his general habits of life.

Adhesiveness or Friendship rouses every social element. It also awakens Approbativeness; it acts through Cautiousness to inspire anxiety for friends; it rouses Combativeness and Destructiveness to defend friends

and fight for and protect them; it leads to a fraternal sympathy, and the tendency to think of others as well as of self.

When Parental Love or Philoprogenitiveness becomes excited, how it wakes up the defensive elements! The cat having kittens to protect would fight an acre of dogs. The timid partridge, so fearful of man that it requires great skill to get a shot at one, will pitch battle with man in defense of her chicks. We have often stumbled upon a brood of young partridges in the forest, and the first warning we had was the blows about the feet from the wings of the mother, which refused to be kicked away from us, when we wisely and mercifully beat a hasty retreat, in admiration of the motherly instinct which thus risked self and overcame its native timidity. The human parent generally lives for the child, rejoices and suffers on its account, and evinces in its behalf more of the God-like spirit than in any other phase of character.

FIRMNESS calls to its aid its neighbor Conscientiousness, to indorse its determinations, and thus aid it in maintaining its steadfastness. Self-Esteem imparts to steadfastness dignity and assurance; it teaches self-respect and confidence. Approbativeness adds its warning against the disgrace of a vacillating course, and thus inspires stability if not obstinacy in Firmness. Combativeness and Destructiveness readily listen to the voice of Firmness, and offer offense and defense in conjunction with its mandates. Hope warms up at the touch of Firmness, and promises victory and success to perseverance; while Veneration, trusting in the "Eternal One who changeth not," gives new sanction to honest determination.

CONSCIENTIOUSNESS instructed by the intellect as to the right, or accepting instruction from revered seniors, quickly calls to its aid many of the neighboring organs. Firmness says, "Be steadfast, immovable," in the faithful continuance in good works. Veneration says, "Fear God and work righteousness." Hope and Spirituality add, "And you shall be accepted with Him." Cautiousness says, "Fear, lest a promise being left any should come short of it," while Combativeness says, "Fear not to do your duty in a righteous cause." Conscientiousness often impels to duty against the love of ease and

defective energy, arouses the love of property and of praise, keeping meanwhile the intellect active to devise proper ways and means to secure the right.

BENEVOLENCE seldom acts alone. Acquisitiveness itself has no stronger incentive to action than that which comes from Benevolence. As "it is more blessed to give than to receive," the man has pleasure in the acquisition of property, and greater pleasure in bestowing it upon family, friends, and the poor. When, therefore, Benevolence yearns to do good, but lacks the means, it awakens Acquisitiveness and the intellect to plan for acquisition, and the organs of industrial energy to furnish means for generous distribution. Wealthy philanthropists, who endow institutes, colleges, dispensaries, or hospitals, do not enjoy half so much pleasure in the acquisition of wealth as they do in bestowing it in obedience to Benevolence, because Acquisitiveness itself still maintains in the institution a kind of property, and is gratified to see profit accrue to a good cause, while Benevolence, the reason, and even the sense of praise, recognize the good that is being done and to be done, as well as the just honor which is accorded to beneficent acts. Was ever prince in his gorgeous palace so happy as Peter Cooper is when he sees the good that is being done by the endowment of the Cooper Institute? We envy the rich the opportunity they have of making the ages bless them for "devising liberal things." How powerfully does Benevolence excite Combativeness to defend the weak and oppressed—and in the surgeon, the organ of Destructiveness to perform the severe operation for the patient's good. Man will risk more and fight harder to protect a child or a wife than he will in his own behalf, because a sacrifice for the sake of others arouses the moral and social qualities, whose combined activity constitute higher and purer motives for action than even those of self-preservation.

Thus the reciprocal interplay of the faculties serve to make up the varied qualities of character, and those wonderfully complex shadings which, at different times and under different conditions, make a man appear to have many characters. As many musical instruments, and a great number of notes in

each are required to produce the highest order of harmony in music, so the greater the number of faculties which can be called into exercise in the production of a given judgment or mental effort, the richer will be the result.

One looks at a picture and sees grass, trees, water, cattle, men, and sky; and having untrained perceptive faculties, and no culture of the esthetic sentiments, he takes account of the grass as so much pasture, of the cattle as so much beef, of the trees as so much cord-wood or timber, and of the water as a stream for mills, boats, or fish,—and here the significance of the picture ends. Another looks at the same picture, not through the perceptive and economic faculties only, but his Ideality and Sublimity; his Form, Size, Weight, Color, and Order, together with his moral and social nature, etherealize the work upon the canvas. All that which the words summer, home, and affection mean, glow in the work before him. To him, the placid, outspread water is nature's mirror, and the smiling sky and the fleecy clouds are repeated on its fair face. The singing rill with its sparkling spray is a symbol of happy youth, and brings back teeming memories of the pleasant past. The trees, laden with the honors of ages, seem full of poetry, of sunshine, and the gushing songs of birds. The soft grass, vocal with insect-life, indicates the teeming beneficence and bounty of the Creator, and the quiet cattle reposing on its bosom evince contentment and peace, and over the whole picture there broods an air of taste and refinement, imparting a dreamy sense of fragrance and harmony as from the garden of God.

WHENCE AND HOW?

BY J. N. CAVANESS.

DID it come in the whispering breeze,
Or in dreams in the hush of night?
At the blush of the rosy eve,
Or the dawn of the morning light?

DID a seraph on joyful wing,
Come near me when wrapped in sleep,
And vision the secret sweet—
Too sweet for me ever to keep?

DID a fairy the message bear,
When no one of earth was near,
And brushing my locks away,
Gently whisper it in my ear?

Did the touch of an angel's wing
Fan the mists from before my eyes,
And permit me to look on the one
Who will be my heart's richest prize?

I know not from whence it came,
Or how the glad news was made known;
All I know is this—I am lost in love,
And my heart is no longer my own.

CHANGES OF SECTARIAN BELIEF.

MR. EDITOR—In your January number you copy from the *Christian Advocate* the item relating to the "passing over" of the Rev. Wm. H. Milburn to the Methodist communion, and in your editorial remarks ask, "Is it merely the preference of prejudice? or is there a reason for it? Which is the best?"

I shall not attempt to go into a metaphysical, theological, or even esthetical consideration of this question, but having given the matters of which you inquire some thought and investigation, may at least give the conclusions reached, and the reasons therefor.

I propose taking up the last question first, "Which is the best?" It is but natural for every one to maintain that what they adopt is certainly so, or they would discard it. But mere assent does not always make a thing right, or even the best. The world is full of examples of this fact. Nor will even education and reason, and thought or experience, always place mankind either in the right belief or in the right course of action, unless they get on the right track, and have their premises correct.

The present question, however, hinges upon a single fact. A man of education, culture, deep thought and varied erudition is brought up from childhood under certain conditions. At a stage in his life he feels that he has not attained to that which it is his duty to become, and with great moral courage (for it does require great moral courage to turn the back on old friends) he renounces his early education and views, and enters upon a new course of life. After the first stage of a man's life he returns to his old associations, and says, truly, "As one advances in years he finds it hard to form new attachments, and the heart turns with inexpressible longing to the friends and associations of earlier days." The question, I think, is here answered. The old sickness for home has triumphed, and moral courage gives way, and the subject returns. There have been, however, more notable examples of such action in the departure to and return from the Roman communion of a number in the Episcopal Church, in which there was far more logic and erudition displayed in explanation of the causes

which led to their changes; none, however, had any more real cause for their conduct than the particular case we have before us. "Is there a reason for it?" you ask. By reason I understand you to mean that process of the mind by which different views are placed side by side, comparisons made, and from which a judgment is formed as to which is the correct one. Reason, in any case, can only go so far as the knowledge of the individual extends, and the knowledge of the individual extends only so far as the advantages and experience which have been granted him or her. Preference or prejudice acts independent of any of the processes which we call reason, and can have no just warrant or authority.

Premising, thus far, I propose to explain the principles, practices, and foundation of the Episcopal Church, or that denomination from which Mr. Milburn passed over after having tried its paths for seven years. It starts, in the first place, with the fact that Jesus Christ established on this earth a visible, tangible church, which was to be for all time the receptacle of his faith and doctrine, and by which the world was to gain the knowledge of his mission and work. In this Church he appointed ministers and stewards to maintain, govern, and perpetuate it; he established forms of acceptance, and institutions for memorials, so that it should be openly acknowledged, and ever be held in remembrance, and promised that "the gates of hell should never prevail against it!" His first ministers obeyed his mandates, and amid troubles and persecutions established in all the then known world congregations of this Church, which, amid error, corruption, and persecution, has continued until the present day.

I shall make no invidious comparisons, but merely state that as far as the principles, practice, and doctrine of the Episcopal Church are concerned, they are contained in the Bible, the Book of Common Prayer, and her Articles of Religion. The Gospel of Christ is the sole rule of faith as accepted and interpreted by the Catholic Church, which acceptance and interpretation must be in accordance with the revealed word of God, for whatever is not con-

tained therein, or may not be proven thereby, is not to be held as a matter of faith. These propositions all bodies professing Christianity tacitly consent to, except it be the matter of interpretation,* which, with most of them, is left to private judgment, and here is the rock upon which the split takes place, and where many founder. We feel safe in asserting, outside of this there is not the least shadow of difference, and we appeal to the *reason* of man to decide whether the combined interpretation of ages, free from all personal or partisan bias, is not more likely to have a show of truth than that of an individual, or a class of individuals, with preconceived or biased ideas of what it ought to be.

No denomination, except the Roman, has ever said aught against the Episcopal communion but what may be traced to this source. The great schisms of the present day are all founded upon this principle, and we know that it is capable of still further departures, and all to claim to be of the body of Christ. But, can Christ be divided? There is no Scriptural truth, there is no Scriptural practice, there is no Scriptural doctrine but what the Episcopal Church accepts, and which it freely proclaims. It is not so popular as many others, because it can not lower its standards to suit individual tastes and feelings. It appeals to human nature to discover its spiritual wants, and provides for them; it appeals to Scripture to know its demands, and adheres to them, turning neither to the right or the left to please the capricious taste of mankind.

There is, however, a far wider breach, not of

doctrine, but of practice, between it and many of the other denominations of the present day. Most of them have gone out from its communion, and it looks upon them as schismatics. It looks upon them as having departed from that order which is necessary for a successful warfare against Satan, and can not countenance a division which is weakening the strongholds of Christianity. It does not sanction their interpretation of Scripture, and therefore can not allow of their conclusions.

These are only a small part of the real difficulties in the way of a unity, and yet they constitute no little cause of separation. We leave out of the question tradition, the decisions of Councils, and the opinions of wise and godly men in this question, and look solely to the Scriptures; and if we take the simple word to our mind, if there is warrant for anything, there is certainly authority for that doctrine, that practice, and that order which is called the Episcopal, while with too many of the other forms there is but the accepting of one idea or one precept, and straining everything else to bend to it. Why, then, will there be changes? It was the boast of a Jesuit priest that if he could have the children until they were ten or twelve years old, others might teach them after that. It is hard to throw off early impressions however fallacious, and if there is not a deep and abiding principle beneath a man's belief, he will either be governed by his preferences or his prejudices; he will either seek the associations of early years, or close his ears and eyes to everything which may conflict with his first impressions.

W. G. P. BRINKLOE.

"STEPPING-STONES."

TENNYSON has a beautiful truth set in a beautiful stanza. I leave my readers to find the passage. It refers to the turning of the events of our lives to "stepping-stones to better things." Very many never realize this—perhaps some may, after reading it on my ephemeral page, and it may influence them long after the medium of the in-

fluence has been thrown aside in the rapid march of periodical literature.

I have been trying to realize the truth myself, this evening, by naming over various stepping-stones in my own life, or, rather, what may be "stepping-stones," if I so use them. Oh, reader! you have had them also—do you consider them as such?

If your dead self, that is, all the Past up to the moment in which you read this, be looked at with Janus' eyes; the fair remembrances of lovely scenes and faces; of ardent studies, sports, strivings after distinctions; of family affection, friendship, love, fair stones are they? Did they serve you well, helping you straight

* We do not mean here private judgment. This is the heritage of every responsible being. We must make a wide distinction between the right of private judgment and private interpretation. The one concerns only individual opinions, the other settles doctrines for ages. The one was given by God to man, the other was delegated by Christ to his Church.

onward? or have you let the sharply cornered, rougher stones, tumbling this way and that, displace the others till life seems a brawling stream, with no sure footing to the happy shore—to the celestial hills? These rough stones massed together form the firmest spots upon which to rest your foot. The weary hours of sorrow, pain, remorse, the bitter ones of anger and despair, the blasted hopes, the false caresses, the mortification and anguish of loving and caring for those who heed your love and care as little (nay, not as much) as they do the light and air that play daily around them; the pangs of wounded vanity; the misunderstandings of those you love or respect; the misrepresentations of those who should respect you; the consciousness of failures in life by your own fault, or that of others—have you stumbled or fallen among all these? Wounded, are you helplessly mourning or struggling with cries of impotent rage, thus retarding your speed upon your journey and the attainment of the purpose for which you journeyed? or have you manfully accepted each event of your life

as stones joining them to form a foothold where they threaten life or life's happiness? "Stepping-stones to better things." How grand, how beautiful an idea! Then linger not sadly on the past—steadfastly use it as a causeway only. Have you suffered? You can pity others. Have you enjoyed? You can make those who have not, glad that you have. Have you earned distinctions? There are more before you, Look not back—fold not your hands—up, and be doing. Make your life's changes, good or bad, a series of firm stepping-stones to the glorious Hereafter, the better things! Let no false pride delude you. March rapidly, with no pause for weak repinings. Where lay errors, from want of judgment, want of love, want of experience, say boldly, "Therein I erred; but I will try to avoid those errors for the future, God helping," and as helpers, Humility and Faith will lend their sustaining hands.

Sure-footed and courageous, oh, traveler! press forward, you that would make your earthly days stepping-stones to the heavenly land, the land where awaking in His likeness we shall be "satisfied."

EMBERS.

GEORGE H. HEPWORTH, LATE OF THE CHURCH OF THE MESSIAH.

THE religious circles of New York and New England have been considerably agitated over the recent departure of this young but eminent divine from the Unitarian denomination. The circumstances which led to his change of religious belief have been discussed by the newspapers, both religious and secular, and have been elaborately shown in the recent discourses of the gentleman himself. The reasons assigned amount simply to this, that Mr. Hepworth had become convinced that Unitarianism was not sufficiently sustained by that generally received rule of religion and morality, the Bible, while Trinitarianism was, and he could no longer maintain his old standing in the religious world without violating his conscientious convictions. It will be remembered that Mr. Hepworth succeeded Rev. Dr. Osgood in the ministrations of the Church of the Messiah, in 1869, that pulpit having become vacant on account of the departure of its veteran pastor also from the Unitarian ranks. It is said, however, that Mr. Hepworth had been for several years growing conservative in his theological views, and had more than once

endeavored to bring the Unitarian conference to a definite statement of views with regard to the points of difference subsisting between them and other denominations of Christians, and that having failed in this undertaking he at length concluded to separate from that body.

He was born in Boston, Mass., February 4th, 1833. On his mother's side he is of French descent, and some of his ancestors met the fate of the party leaders in the French Revolution. Even when a child he gave promise of all his future oratorical ability. Almost as soon as he was out of the cradle he commenced his professional labors, gathering his playmates around him and exhorting them in a pathetic fashion. His education began in the Boston Latin School, and was continued under the direction of private tutors, his health being so delicate as to prevent him from adopting the usual college course. After three years of study in the Cambridge Theological School he received a call from a Unitarian church in Nantucket, in 1855. There he remained two years, at the end of which time, being dissatisfied with the

apparent results of his initial preacher life, he returned to Cambridge, and there he pursued a course of study as resident graduate for a year. In December, 1858, a few families in South Boston organized a Unitarian society, and invited Mr. Hepworth to assume the functions of the pulpit. This second beginning proved successful. His ministry was even brilliant. The society grew so rapidly that a spacious church edifice was soon erected on Newton Street, and sometimes 1,500 people filled the building to hear the gifted young preacher. His efforts in Boston were not confined entirely to a set class. He felt that a preacher should not only consider the religious wants of the well-to-do, but should look after the middle class and the poor. In furtherance of his views he hired the Boston Theater, and for four winters preached therein Sunday evenings. He commenced a theological school for the instruction of young men, which after three years was merged in the Cambridge School of Divinity. On the breaking out of the late war Mr. Hepworth exhibited great zeal and enthusiasm for the national cause. He served

as a chaplain in a Massachusetts regiment, thus showing his earnestness in a thoroughly practical way. In 1863 he joined the expedition of Gen. Banks, and was appointed to a place on his staff in the celebrated Louisiana campaign, having charge of the free labor system. On his return home he wrote an account of his army experience, which was published under the title of "The Whip, Hoe, and Sword." His abilities as an orator have procured for him special recognition with the general public, his services being often required as a lecturer. His naturally musical voice is finely modulated, and his style of utterance is easy and natural.

From the general contour of the head Mr.

Hepworth should be distinguished for his sympathy, suavity, humor, and intuition. His intellectual organs are very strongly marked. The profile is also striking with respect to the prominence of the organs of Benevolence and Human Nature. There are all the indications of frankness, liberality of sentiment, and respect for the opinions of others which are likely to be found in one organization, these qualities, however, being attuned and developed by careful culture, and his unusual opportunities in the way of practical experience in human affairs. He has very much sensitiveness and susceptibility, quickly appreciates those influences which appeal to the

finer feelings, and readily responds to their demands. He also possesses a temperament which contributes to buoyancy in thought and emotion, as well as to exuberance in fancy.

An abstract from a recent sermon on "Prayer" will furnish some examples of Mr. Hepworth's style.

"My brethren, our lives are hard. They are filled with a thousand temptations. Not only the young are teased by the devil, but those in

middle life are lured on by him. In the household, in the street, at the wharves, temptation comes in an alluring guise and draws us away. Then we are conscious of our weakness. We can't philosophize into virtue, we can't think ourselves into power and influence. We must lean on some one, we must realize a higher power. When we are pressed down and weary, God takes us by the hand, and we are safe. When we are buried in sorrow, the clouds pass, and God's voice says, 'Son, I'll help you,' and that is enough. How tired we get! the burden becomes so great, we can't bear it. Then we get down on our knees and say, 'O God, help us!' That's all. Then a still,



small voice comes, 'Son, I will help you:' the heart feels it, if the ears do not hear it; and we get up comforted and happy. Such is the secret chemistry of prayer. But how does prayer act? I know nothing of the mechanics of prayer. A word of agony goes to heaven and comes down full of blessing, and I enjoy it, though I do not understand it. I know that food gives health and strength and vigor. Then, shall I not eat because I do not understand the physiological process of digestion? No; instinct is stronger than reason; I know by experience that it will do me good. I do not know why the seed I put in the ground bursts and sends forth its shoots, nor how its thousand tendrils draw their nourishment until leaves are put forth, then buds, then the perfect flower, making the whole air fragrant; but the fact itself satisfies me, because I have tried and planted the seed, watered it, watched it carefully, until I was repaid by its beauty. It is enough for me; if you can explain, I will be glad, but that I do not understand it, is no reason I should not enjoy my flower garden. Dear friends, it is the same with this mystery we call prayer.

"We don't know how the strength comes, but we pray and expect it. God doesn't always explain; but if you wish to know his power, look back to the times of the grand old martyrs who faced death in every form. So long as the soul communes with the Father, it can bear everything, even as the martyrs went to the stake and were lost in ecstasy, while their bodies were burnt and they felt no pain. Their bodies dropped from their souls as clothes, because they lived in God. They did not trust in reason, but in spirit. In our lives there is a practical value in prayer. It is the salvation of the young, the shield of middle life, the hope of the aged."

HAPPY FACES—HOW TO KEEP THEM SO.—Carry the radiance of your soul in your face. Let the world have the benefit of it. Let your cheerfulness be felt for good wherever you are, and let your smiles be scattered like sunbeams "on the just as well as on the unjust." Such a disposition will yield you a rich reward, for its happy effects will come home to you and brighten your moments of thought.

Cheerfulness is a duty; it makes the mind clear, gives tone to thought, and adds grace and beauty to the countenance. Joubert says, "When you give, give with joy and smiling."

Smiles are little trifles, cheap articles, to be

fraught with so many blessings both to the giver and receiver—pleasant little ripples to watch, as we stand on the shore of every-day life. They are our higher, better nature's responses to the emotions of the soul.

Let the children have the benefit of them; those little ones who need the sunshine of the heart to educate them, and would find a level for their buoyant natures in the cheerful, loving faces of those who lead them.

Let them not be kept from the middle-aged, who need the encouragement they bring.

Give your smiles also to the aged. They come to them like the quiet rain of summer, making fresh and verdant the long, weary path of life. They look for them from you who are rejoicing in the fullness of life. Be gentle and indulgent to all. Love the true, the beautiful, the just, the holy; in short, be cheerful, and you will have a happy face as long as you live.

DRINKING WOMEN.

A PAMPHLET lately issued by the Appletons, of New York, has the following suggestive and startling facts:

In New York city, for the past ten years, 132,304 persons, of whom 66,629 were men, and 65,674 women, were committed to the city prisons for intoxication alone; according to the City Inspector's report, from 1851 to 1855, there were 2,522 deaths caused by intemperance, and from that period to the 31st of December, 1868, they amounted to 2,170.

In 1865, out of 18,518 committed, there were 11,397 women, 7,220 men. Reports of the city prison show that women are much more incorrigible than men. The Commissioners of Charities and Corrections, in their report, dated January, 1867, in speaking of the workhouse, remark:

"There, the vagrant, the slothful, and the drunkard are taught, by forcible lessons in hard work, the folly of their past conduct. The term of service is brief, rarely exceeding three months, but is a term of sharp discipline, and generally inspires among the males a wholesome dread of their repetition. On the female prisoners, however, this effect is not produced. They are subjected to the same rules as the men, but neither the sense of confinement, nor their laborious employment, have much effect on their conduct. They are impatient for the end of their term of committal, but it is only that they may

indulge in their craving for liquor, and in a few days they are again inmates of the work-house. In many instances women have been committed thirty and forty times, and in some cases one hundred times."

[The proportion of women in the total of this exhibit is most painfully large, to say nothing of the impression made on the mind of the thoughtful by the remarks concerning the apparent incorrigibility of female inebriates. Can it be possible that among these

unfortunates there are found very many whose birth and education allies them to the better class of our population? If so, certainly there is work for the true reformer in our American homes. But we are skeptical on this point, and will not think that the statistician has done his duty until we are furnished with the particulars, showing the nationality and social condition of the wretched victims of intemperance.]

Physiognomy, or Signs of Character.

Of the soul, the body form doth take,
For soul is form, and doth the body make.—*Spenser.*

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONTINUED FROM OUR FEBRUARY NUMBER.]

SOME FURTHER OBSERVATIONS ON THE FORM AND PROPORTIONS OF THE SKULL, AND BONES OF THE FACE.

LET us return with more just principles to the study of the lines marking the regions of the face and head.

A line drawn from the tube of the ear to the eyebrow, or prominence of the frontal bone, and one from the same point to the chin, include the face in a triangle. If another line be drawn to the lowest point of the nose, we divide the face into two regions; the lower occupied by the masticating apparatus of teeth, jaws, and their muscles. If

face loses all dignity and form. The eye is especially diminutive, and the nose misshapen.

It will be found that the bones correspond with the general skeleton; very tall men,



FIG. 1.—TOO MUCH JAW.

this alone be enlarged, the effect is an encroachment on the nose and orbit, and the



FIG. 2.—A RICKETY HEAD.

especially if gigantic, have large jaws, and comparatively small heads. In rickety deformity of the bones, the character of the face is exhibited, as in this sketch, by a defect in the size of the jaw-bones, which have yielded to the action of their muscles. The qualities of mind, evinced in expression, may redeem any degree of deformity; but the peculiarity of the countenance here is that of

rickets; the prominence of the forehead arises merely from the accumulation of bone, and not from a superior development of the brain. We have a further opportunity of observing that the projection of the facial line, unaccompanied with due conformity of features, only adds to the deformity.*

Blumenbach, dissatisfied with the facial line of Camper, contrived a different mode of distinguishing the capacities of the head and face. He selected two bones of the skull: the frontal bone as representing the development of the cranium or brain-case; and the superior maxillary bone, as the seat of the organs of sense, which are considered as opposite to the intellectual properties. He placed the vertex of the skull toward him, so as to look over the brow or forehead; and then he noted how much the bones of the cheek, the nose, and the upper jaw projected beyond the level of the frontal bone. This method he used as better suited to mark the peculiarities of the national head, and to be employed in the skull rather than in the living head. It may be useful, but it is manifestly imperfect. The breadth of the face may be noted in this manner; but it will better serve the purpose of the artist to draw the face in front, and to apply the principle already explained, in the profile.

It was observed in the preceding pages, that the different plans of measuring the

head might assist in pointing out the varieties in the form of the head; but that for distinguishing what is acknowledged by all to be beautiful in the antique, none of them proceeded on a just principle. A circumstance to which Professor Gibson, of Philadelphia, then my pupil, first drew my attention, convinced me that the methods which physiologists had practiced were very incorrect. He placed before me the skull of a European and of a negro; and resting them both on the condyles of the occipital bone, as the head is supported on the spine, it appeared that the European fell forward, and the African backward. This seemed remarkable, when both physiologists and physiognomists were describing the greater comparative size of the face, as the grand peculiarity of the African head. I was desirous of investigating this matter further.

The difficulty of finding a line by which to measure the inclination of the face would be removed if we were to take the head as fairly balanced on the articulating surfaces of the atlas, or first bone of the spine; but in the living body, it will not be easy to fix the head in the equipoise. Something may be attained by comparing the general position of the head, in the European and the negro; but nothing approaching to the accuracy which observation pretending to science requires.

To find a line which should not vary, but enable us to measure with correctness the angles both of the facial line, and of the line intermediate between the cranium and the face, I poised the skull upon a perpendicular rod, by passing the point through the foramen magnum into the interior of the skull, so that the upper part of the cranium rested on the point. By shifting the skull till the rod was exactly betwixt the condyles of the occipital bone, and in the center of the foramen magnum, I procured the line which was wanted.

I now divided into degrees, or equal parts, the great convexity of the cranium, from the setting on of the nose on the fore part, to the margin of the foramen magnum behind; and having so prepared several skulls for adjustment on the rod, I began to make my observations.

In comparing the European skull with that

* "In visiting the villa Albani, among the indescribable beauties which are everywhere around us, the party was amused with my attention being fixed upon the statue of a deformed person. I was indeed struck with the truth of the representation: the manner in which the ribs are distorted, the head sunk upon the breast, and the exaggeration of certain muscles, consequent upon displacement of the bones. I was thinking of the accurate conception which the ancients had of human anatomy, and the precision with which they copied from nature.

"This is said to be a statue of Esop, and on referring to Visconti, where he treats of the fabulist, I see that his engraving of the statue, beautiful as it is, is deficient in what appeared to me a due correspondence in the countenance, and the distortion of the body. On comparing it with a sketch I had made, I find that I have marked more distinctly the position of the head, the projection of the chin, and the fullness of the forehead characteristic of that defect in the face which arises from the jaw yielding to the action of the muscles during the age when the bones are soft.

"Visconti discovers in the face a spirituality quite in contrast with that expression which the ancients give to buffoons and dwarfs, whose physiognomy they always make ridiculous."—*Note from Journal*

of the negro, the point of the rod in the latter touched the inside of the cranium several degrees nearer to the bones of the face, or more forward on the cranium, than the former.

On measuring the angle of the facial line of Camper with this perpendicular line, in a European skull the most perfect in form of any I possessed, I found the difference to be ten degrees.

The cause of the difference being much greater between the European and African skull, in this way of measuring, than by Camper's plan is, that here the facial line has reference to the whole form and proportion of the head; whereas in Camper's measurement it marks only the inclination of the face.

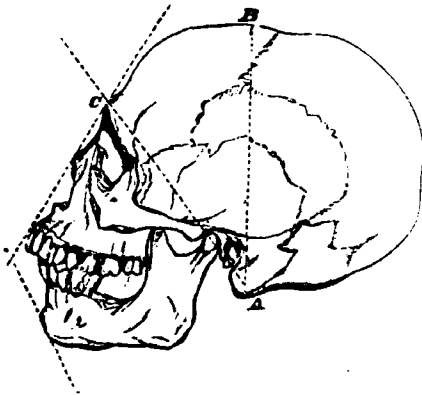


FIG. 3.—AUTHOR'S FACIAL ANGLE.

We have now an explanation of the peculiarity in the position of the negro's head, the upward inclination of the face, and the falling back of the occiput. And here, too, we have it proved, that it is an error to suppose the negro head to be remarkable in character on account of any increase in the proportion of the bones of the face to the cranium; for the area of the bones of the face is in this way shown to bear a less proportion to that of the bones of the cranium, in the negro than in the European head.

My next object of inquiry was to find on what the distinctive character of the negro face really depends. For to the eye the negro face appears larger, while in fact it is proved to be smaller than the European, considered in relation to the cranium. I took off the lower jaw-bones from both the European and the negro skull; and then, in order to poise the skulls on the perpendicular rod, it was required to move both forward on the point of the rod. But it was found neces-

sary to shift the negro skull considerably *farther* forward than the European; the point of the rod thus indicating by its removal backward on the scale, that the lower jaw of the negro bore a greater proportion to the skull than that of the European. The facial line was of course thrown farther backward in both skulls on taking away the jaw; but the jaw of the negro being larger than that of the European, the inclination backward was greater in the negro skull. Proceeding to take away the upper jaws, and then the whole bones of the face, the index on the surface of the cranium showed that the jaw-bones of the negro bore a much greater proportion to the head and the other bones of the face, than those of the European skull; and that the apparent magnitude of the bones of the negro face resulted from the size and form of the jaw-bones alone, while the upper bones of the face, and indeed all that had not relation to the teeth and mastication, were less than those of the European skull.

In proceeding with these experiments, I changed the manner of noting the variations in the inclination of the cranium; because I perceived that an index, marked on the convexity of the skull, varied according to the form of the head. Preserving the principle, I measured the inclination of the cranium by an angle formed by the perpendicular line (A B) and a line (A C) intermediate between the cranium and the face. On poising the cranium on the rod, after taking away all the bones of the face, it appeared that the negro cranium had the line elevated nearly ten degrees more than the European. I also found, on comparing the cranium of a child with that of an adult, that it was deficient in the relative proportions of weight and capacity on the fore part—that the line was depressed by the size of the forehead increasing in proportion to the advance in maturity.

On looking attentively to these skulls, it was evident that there were distinctions to be observed in the form of the cranium itself, independently of the proportions between the face and cranium; that these varieties depended on the form of the brain, and proceeded (I think we may conclude) from the more or less complete development of the organ of the mind. [There is no doubt at all about this. All phrenological experi-

ence confirms it.] In the infant there is a deficiency of weight, and a less ample area in the higher and anterior part of the brain-case. I say less ample, only in comparison with that which we may estimate as the standard, viz., the adult European. In the negro, besides the greater weakness and lightness in the bones of the whole skull, there is a remarkable deficiency of length in the head forward, producing a narrow and depressed forehead; whereas a large capacious forehead is allowed to be the least equivocal mark of perfection in the head.

Having been brought by this more accurate method of measuring the skull, to observe distinctions not only in the cranium and bones of the face, but in the face itself, and in the cranium independently of the face, I wished, in the next place, to consider more at large the varieties in the form of the face, and the cause of the secret influence of certain forms on our judgment of beauty.

From the examination of the heads, both of men and brutes, and of the skulls of a variety of animals, I think there is reason to conclude that the external character [configuration] consists more in the relative proportions of the parts of the face to each other than has been admitted. On first consideration we are apt to say, that in the beautiful form of the human countenance the likeness of the brute is inadmissible; that wherever we see a resemblance to the brute in the form of the whole countenance, or in the particular features, it implies degradation. But this is true to a limited extent only; and how far it extends, the examination of the uses of the parts will inform us.

We have therefore again to inquire, which are the nobler features of the face, and what belong to the inferior functions.

In examining the mouth and jaws of animals we shall be convinced that the form of the bones is adapted to the necessities of the creature, independently altogether of the sense of taste; that in man, whose jaw-bones are smaller than those of other animals, this sense is most perfect, most exquisite in degree, and suited to the greatest variety in its exercise. Turning to the skulls of the horse and the lion, we shall see that the one is fitted for powerful mastication, and the other for tearing and lacerating, not for cutting or

grinding; and if we examine the form of the teeth more narrowly, we shall perceive that there must necessarily be a form of the jaw corresponding to these actions. In the lion, the tiger, and all carnivorous animals, much of the character of the face lies in the depth of the jaw forward; because this depth is necessary for the socketing of the long canine teeth. When, on the contrary, the jaw is deep and strong toward the back part, it is for the firm socketing of the grinding teeth, and is characteristic of the form of the head of the horse, and of all graminivorous animals. There is also a peculiar form of the head and distinct expression in the rodentia, and such animals as have to pierce shells for their food, as the monkeys, which is produced by their cutting teeth being placed at right angles in their jaws, for the action of gnawing.

Now it certainly is by that unconscious operation of the fancy, that associating power which has a constant influence on our opinions, that a human face with protuberant jaws seems degraded to the brutal character; that the projection of the incisor teeth especially gives a remarkable expression of meanness; while we see that the enlargement of the canine teeth, as in the demons of the Last Judgment of Michael Angelo, produces an air of savageness and ferocity.*

When we consider further the muscles appropriated to the motions of the jaws, we may comprehend why it should be thought a deformity when the zygoma (the arch of bone on the temple) is remarkably prominent. It is enlarged to permit the massy temporal muscle by which the jaw is closed to act freely, and its form corresponds with the size of the jaw, and with the canine teeth. This will be very evident if we place the human skull beside the skull of the horse, the lion, the bull, the tiger, the sheep, the dog, etc.

It has already been said that a comparison of the area of the bones of the head and face in different animals will not inform us of the relative perfection of the brain in its exercise. But still we may recognize, in the form of the jaws and bill, the beast or bird of rapine; in the breadth and extent of the

* Fairy Queen, Book IV. cant. vii. 5.

central cavities of the face, the seat of the organ of smelling, tribes which hunt their prey; in the prominent eye placed more laterally, timid animals which are the objects of the chase; and in the large socket and great eyeball, the character of such as prowl by night. With these variations in the perfection of the outward senses, there are, no doubt, corresponding changes in the brain, and, therefore, in the instincts and habits of animals. [In Comparative Physiognomy we find that the principle does apply, that a person has characteristics of disposition which assimilate to the known traits of the brute, to the facial expression of which his own face may bear more or less resemblance.]

In obtaining a line which shows with precision the bearings of all the parts of the head, I think that I have reduced this subject to greater simplicity; and have been able to make observations more correctly than by the methods hitherto in use: I have shown that the relative capacity of the cranium or brain-case to that of the face, as containing the organs of the senses, is insufficient to mark the scale of intellect, or to explain the distinctions of character in the human head: that the perfection of the human head greatly consists in the increase of the cranium forward; in the full and capacious forehead; and that the cranium of the negro, when compared with the perfect cranium of a European, has less capacity at the fore part.* It has been shown that in the negro the whole of the face is actually smaller, instead of being greater, when compared with the brain-case, than that of the European; but that the jaws, contrasted with the other parts of the face, are larger. The conclusion to which these views lead is, that some principle must be sought for, not yet acknowledged, which shall apply not only to the form of the whole head, but also to the individual parts. This principle, I imagine, is to be found in the form of the face as bearing relation to its various functions; not those of the senses merely, but of the parts contained

in or attached to the face—the organs of mastication, the organs of speech, and the organs of expression.

And here it is to be observed, that it is not necessarily a deformity that a feature resembles that of a lower animal. In our secret thoughts the form has a reference to the function. If the function be allied to intellect, or is connected with mind (as the eye especially is), then there is no incompatibility with the human countenance, though the organ should bear a resemblance to the same part in a brute; whereas, if it has a relation to the meaner necessities of animal life, as the jaws or the teeth, the effect is incompatible, and altogether at variance with human physiognomy.

If we take the antique as the model of beauty in the human head, we shall confess that a prominent cheek-bone, or a jaw-bone large and square behind, is a defect; that the great depth of face, produced by the length of the teeth, is also a deformity; that the projecting jaws are still worse; and, above all, that the monkey-like protrusion of the fore teeth takes away from the dignity of human expression.

ESSAY II.

CHANGES FROM INFANCY TO AGE. OF THE SKULL, AS PROTECTING THE BRAIN. OF THE CHARACTERS OF BRUTES. NATIONAL PECULIARITIES.

THE bones, and the parts which cover them, or are contained within them, grow, as it were, by one impulse, so that they correspond together; the fleshy lips of the negro are suited to his large protuberant teeth. Among ourselves, a square jaw-bone is attended by a thickness and heaviness of the cheeks and lips; and if the canine teeth, the strong corner teeth, be unusually long and prominent, there is not only a coarseness and heaviness of a different kind, but a certain irascibility of expression. In women and young persons with large incisor teeth, there is a pretty fullness and ripeness of the lips.

The whole character of the face of a child results from the fleshy parts and integuments being calculated, if I may use such a term, for the support of larger bones than they possess in early years. The features are provided for the growth and development of the bones

* In comparing the skulls of men with those of brutes, *e. g.* the chimpanzee, it can not be just to measure the proportions of the cranium behind the foramen of the occipital bone; for that foramen must correspond with the spine on which the head rests; and the position of the animal, monkey, or quadruped must determine the connection of the spine and skull.

of the face, and hence the fullness, roundness, and chubbiness of infancy.

There are some other peculiarities in infancy. For example: the head is of an elongated and oval form, its greatest length being in the direction from the forehead to the occiput;



FIG. 4.—OLD AGE.

the forehead is full, but flat at the eyebrows, and the whole part which contains the brain is relatively large; the jaw-bones, and the other bones of the face, are diminutive; the neck is small compared with the size of the head, owing to the peculiar projection of the back of the head (or occiput).

Compare the outline of the infant's head with that of the boy, and the effect of the expansion of the bones of the face in bestowing the characteristic form of youth, will be apparent. The face in the youth is lengthened, and is less round than that of the infant. The brow, however, is not enlarged in proportion to the increase of the lower part of the face; though the form is so far changed that a prominent ridge is now developed along the course of the eyebrows.

This ridge (the supra-orbital) is caused by a cavity which is formed in this part of

the head by the layers of the frontal bone (or os frontis). It is the enlargement of this cavity (called the frontal sinus) that makes the prominence over the eyes which is peculiar to manhood.

From infancy to adolescence there is a great increase in the size of the upper jaw-bone (the superior maxillary bone). This is chiefly owing to its containing within it another cavity (the maxillary



FIG. 5.—CHILDHOOD.

sinus); which, like the frontal sinus, becomes greatly developed with advancing years. And there are several new characters given to the countenance by the enlargement of the upper jaw-bone which may be regarded as the center of the bones of the face. It has the effect of raising and lengthening the bones of the nose, and of making the cheek-bones (or ossa malaræ) project farther.*

The growth of the large teeth in the adult, contrasted with the child, adds to the depth as well as length of both the upper and lower jaw-bones, and the whole face becomes consequently longer. Another necessary effect is, that the angle of the lower jaw recedes more toward the ear, and acquires more distinctness. Thus it is that by the growth of the teeth, and of those processes of the bones which support and fix them (the alveolar processes), and by the lengthening and receding of the angle of the jaw, a manly

* The cavities in the frontal and maxillary bones communicate with the nose, and assist in giving the sonorous, manly tones to the voice. They are very small in women, as they are in children.

squareness of the chin and lower part of the face takes the place of the fullness and roundness of childhood.

This view of the skull at different periods of life suggests another observation, relating to the characters of age. When the teeth

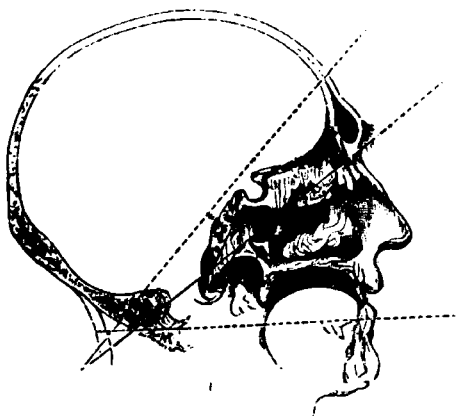


FIG. 6.—BRAIN-CASE IN PROFILE.

fall out in old age, the sockets which grow up along with them waste away. Accordingly, while the depth of the lower jaw-bone, from the hinge to the angle, is undiminished, and its length toward the chin is the same, there remains nothing at the part where the teeth were implanted but the narrow base of the jaw. The effect on the countenance is perceived in the sketch. The jaws are allowed to approach nearer to each other at the fore part; the angle of the lower jaw comes of course more forward, and resembles that of the child, were it not that the chin projects; the chin and the nose approximate, the lips fall in, the mouth is too small for the tongue, and the speech is inarticulate.

Before leaving this subject, we may point out a defect in the sculptures of Fiammingo, who has been justly celebrated for his designs of boys. In his heads of children, it is obvious that he intended to present us with an ideal form, instead of a strict copy from nature. But it will be remarked, that the eyes are too deeply set in his figures. He has made the prominences over the orbits (the supra-orbital ridges), which are peculiar to a more advanced age, distinct features in the child, and has thus produced an unnatural appearance. The only character of the boy which he has kept true to nature is the largeness of the head compared with the face, the

fullness of the cheeks, and the falling in of the mouth and chin. In exaggerating the natural peculiarities, the artist has strictly imitated the antique. But it may remain a question, how far the principle which is so happy in its effect of heightening the beauty of the adult countenance, is necessary or allowable in designing the forms of childhood? ON THE SKULL, AS PROTECTING THE BRAIN.

In touching even slightly on this subject we must attend to certain principles. It is to be understood, that a shock or vibration passing through the brain proves more destructive than a wound penetrating its substance. A skull stronger, thicker, and more solid than that which we possess would not have given greater security; it would have vibrated to a greater degree, and the concussion arising even from trifling blows on the head, would have effectually benumbed the faculties.

A child bears knocks which would be fatal in old age. This is owing to the skull being thin, uniform in texture, and elastic, in childhood; and to the brain being of a corresponding structure. The brain is at this age soft to a degree that would be unnatural in mature years. This resiliency of the skull, and yielding quality of the brain, explain how the child is uninjured by blows which



FIG. 7.—LINGERING SENILITY.

would be attended with fatal concussion in after-life. But there is also a provision in adults for moderating the effects of such accidents. In proportion as the brain acquires firmness during growth, a gradual change takes place in the structure of the bones of the head; the protecting cranium is not sim-

ply strengthened; it is not merely thickened; the flat bones which surround the brain are split into layers, an external and an internal one. These layers have each a different density, and a softer substance than either is interposed between them; the effect of which is, to interrupt that vibration which would otherwise ring around the skull, and reach every molecule of the brain.

I have elsewhere* shown that, in brutes, as in man, the processes and joinings of the skull are formed in relation to the forces to which the head is to be exposed; and that they vary according to the habits or mode of existence of the animal. The tearing fangs of the carnivorous animal, and the still more powerful teeth of the hyena, adapted for breaking the hardest bones, are implanted in sockets of corresponding strength. The horns of the bull, the antlers of the stag, are rooted in bones not only capable of supporting their weight, but of receiving the shocks to which such instruments expose the brain; and the firmness of the sutures in the crania of these animals demonstrates the precision with which everything is set in just proportion.

A remark is here suggested by these considerations. The provisions which we have been noticing in the human head are not designed to give absolute security against violence, but to balance duly the chances of life, leaving us still under the conviction that pain and death follow injury; so that our experience of bodily suffering, and fear of incurring it, while they protect the life, lay the foundation of important moral qualities in our nature.

Let us now direct our attention especially to the forms of the skull. The back of the head is more exposed than the forehead; we defend the front with our arms and hands; not so the back, as in falling backward. There is, accordingly, a very marked distinction in the strength of the occipital bone and that of the frontal bone. The prominence felt at the back part of the head is the center of certain groinings, or arched ridges, which strengthen the bone within. We say groinings, for there is nothing more resembling the strong arches, or groinings, of an underground story of a building than these pro-

jections on the interior of the occiput. In front, the skull forms, on the whole, a lighter and more delicate shell than behind; yet it is not less adapted to protect the brain. The projecting parts of the forehead, which the anatomist calls the *eminentia frontales*, are, undoubtedly, most exposed; but they are, at the same time, the strongest points of the bone, for here the outer and inner surfaces are not parallel; there is an accumulation of bony substance in the two tables, to give them increased thickness. It has already been seen that the immediate prominences over the eyebrows, characteristic of the mature or manly forehead, do not show the exact form of the brain at this part; they are the anterior walls of the frontal sinuses,—cavities which, it has been stated, belong principally to the organ of voice; yet they, and the ridges which project toward the temples, are a safeguard to the brain. Those latter-raised arches, called the temporal ridges of the frontal bone, consist of dense and hard bone, as obviously designed for adding strength, as is an edging of brass, in carpentry, or a piece of steel let into a horse-shoe. Imagine a man falling sidewise, and pitching on the shoulder and side of the head,—he strikes precisely on that point which is the most convex, the most dense, the thickest, and best protected.

Altogether, independently of Phrenology, it has of old time been acknowledged, that fullness of the forehead, combined with those forms which have been noticed, is an indication of intellectual capacity; and, as we have shown, of human character and beauty. Nearly all physiologists have agreed in this view; while some are equally confident in affirming that anatomy affords no foundation for mapping the cranium into minute subdivisions or regions. As nature, by covering the head, has intimated her intention that we shall not too closely scan our neighbors' capacities, she has given us the universal language of *expression*. Man is gregarious; he looks for sympathy; it is not good for him to be alone; he solicits a unity of sentiment; and the language which expresses it is in the face.* [TO BE CONTINUED.]

* Paley's "Natural Theology," with illustrative notes by Henry Lord Brougham and Sir Charles Bell.

[* Nevertheless it is found that one's phrenology and physiognomy are in perfect accordance one with the other.]

HARRIET HOSMER, THE WOMAN EMINENT IN SCULPTURE.

A HIGHLY organized mental condition is apparent in this lady, and there is also shown an unusually strong and positive disposition. The face expresses real character, intelligence, serenity, and originality. How broad between the eyes, showing large Form, or ability to draw correctly! See also how broad between the temples, showing large Constructiveness,—ability to design, contrive, invent, construct! Then there is a fine, full, well-developed intellect, indicating high capability and rare talents. Nor is Benevolence less conspicuous. The affections are indicated in the lips. That is a handsome mouth, an expressive eye, and a well-formed head and face. There is latent power back of those trim features too. When aroused, when fired up, another

character may be seen in marked contrast with that sweet repose. As will be seen from the subjoined biographical sketch, the development of her physical nature was unrestrained by any of those conventional and unwise habits and customs of society so much in vogue. Inheriting in large measure many of the characteristics of the father, she was the more inclined to follow the spirit of his counsels in the way of invigorating and establishing her health. The drift of her mind

toward an esthetic pursuit was strengthened also by the influence of temperament. The gentle, mellow, and pliable artistic nature selects painting as its domain, and in that domain a woman prefers to depict flowers and images of the higher emotions; the strong, positive, and robust artistic nature selects sculpture, or, if painting, the depicting of the varied aspects of nature.

A woman of this order of mind in selecting sculpture, a robust art in itself, weaves into the constitution of her works her feminine delicacy. Her figures exhibit the higher idealism. The breadth of head in the portrait shows comprehensive judgment with reference to things seen and things thought. There is the earnest practicality of the true woman mingled with the warm imag-



ination of the poet. We doubt not that Miss Hosmer, by giving herself up to the prosecution of her artistic employment, has sacrificed many of her most interior yearnings, for in the contour of her face are seen the evidences of strong affection, and appreciation of all that enters into domestic relationship.

HARRIET G. HOSMER, who is perhaps the most widely known among the American female sculptors at Rome, was born in Wa-

tertown, Mass., on the 19th of October, 1830. Her father, an eminent physician of that town, having lost his wife and only other child by consumption, impressed upon Harriet the necessity of good physical training, then and now so much neglected among girls. Accordingly her childhood and youth were spent in occupations and pursuits more like those of a boy than of the conventional young lady. She delighted in her horse and dog, and became expert in riding, shooting, swimming, rowing, skating, and other out-of-door sports. Vigorous in body and bright in mind, she was not easily amenable to discipline when placed under instructors, and many anecdotes are related of her practical jokes and boyish freaks. She is said to have been expelled from one school and pronounced incorrigible in another. At the age of sixteen she entered the celebrated school of Mrs. Sedgwick, of Lenox, Mass., and under her judicious care, and the excellent intellectual and social influences of that delightful village, her bold and turbulent nature seems to have been successfully restrained, and she improved rapidly in knowledge, self-control, and development, while her active habits of body continued. Although restrained, her bold and fearless nature was not eradicated, for the high-spirited girl has developed into an equally fearless, high-spirited, and unconventional woman whose eccentricities have for years been the standing wonder of the Romans. At a comparatively early age she began to give much attention to modeling figures in clay, and after leaving Mrs. Sedgwick's school her early predilections ripened into the purpose to make sculpture a pursuit. She accordingly entered the studio of Mr. Stephenson, of Boston, for lessons in drawing and modeling, and soon finished the bust of a child. She at the same time studied anatomy with her father, and in the fall of 1850, while visiting a school friend in St. Louis, took advantage of the consent of the medical college there to admit female students, and went through the regular college course, receiving a diploma for her attainments; and the immense value of the knowledge she thus acquired has shown itself in all her subsequent work. She traveled in the West unattended, visited the Dacotah Indians and

the Falls of St. Anthony, climbed to the summit of what was deemed an inaccessible bluff, and finally returned to her New England home to occupy a studio her father had prepared for her in the garden. The muscular adaptation and strength gained by her vigorous physical exercise greatly contributed to her success in the manipulation of clay. She now produced her first works in marble—a reduced copy of Canova's bust of Napoleon, and an ideal head called "Hesper." The latter was much praised at the time. Her next task was to cut in marble a copy of a friend's likeness by Clevenger. Miss Hosmer now resolved to carry out at once the one aspiration of all artists—namely, to go to Rome. This resolution was intensified and fixed by an acquaintantance formed at this time with Miss Charlotte Cushman, the well-known actress, and in the autumn of 1852, accompanied by her father and new friend, she reached the Eternal City. Dr. Hosmer at once took daguerreotypes of "Hesper" to Mr. John Gibson, the English sculptor, and asked him to allow Miss Hosmer to become his pupil. At first he hesitated, but after examining the evidences of the young lady's proficiency, he consented, and she was soon at work amid the marble wonders of that renowned artist's studio in the Via Fontanella. Her perseverance and industry were remarkable. She spent her first months in modeling from the antique. She copied the head of "Venus de Milo," the "Cupid" of Praxiteles, and the "Tasso" of the British Museum, alternating her art studies with gallops across the Campagna unattended, to the astonishment of both natives and foreigners. Her first original attempt was a head of "Daphne," then one of "Medusa," both of which were completed in 1853. They were sent to Samuel Appleton, Esq., of Boston, and two replicas of the "Daphne" were subsequently ordered. Gibson recognized both patience and progress in her studies. In the summer of 1853 she finished her first full-length figure in marble—a statue of the nymph *Ænone*, the shepherd-wife whom Paris deserted for Helen. This was ordered by her friend Wayland Crow, Esq., of St. Louis, and gave so much satisfaction that she at once received a commission to execute a similar work for the Mercantile

Library in St. Louis. This commission was filled two years later by a life-size statue of "Beatrice Cenci," representing the maiden lying in her cell after the torture had been applied and just before her execution. Both these statues are very beautiful, the latter especially, which has been pronounced her best work. In them are conspicuous the qualities which have characterized all her later work: clearly conceived ideas, marked simplicity and directness in working them out, unfailing perceptions of the just limitations of her art, and a thorough knowledge of all its mechanical possibilities.

Miss Hosmer's next work, designed under the pressure of pecuniary wants, was a statue of "Puck," an exquisitely humorous little figure, based on Shakspeare's description of the fairy, and one of the most pleasing and characteristic of her works. This statue, which was finished in 1855, was sent to the Hon. Samuel Hooper, of Boston, and three copies of it are in noble collections in England. Among her other works are a colossal statue of Zeno-

bia, architectural in style, with highly finished drapery, massive and dignified; a bronze statue of heroic size of Col. Thomas Hart Benton, which now stands in Lafayette Park, St. Louis, and which has been pronounced by an able critic "the best specimen of monumental statuary in America;" a "mortuary monument" in the Church of San Andrew del Fratte at Rome; "Will-o'-the-Wisp," now in the possession of Mr. George Low, of Boston; the "Sleeping Faun," which found many admirers in the Paris Exposition of 1867; the "Waking Faun," a companion of the latter; a statue of a drowned girl, illustrating "Hood's Bridge of Sighs;" several designs for gateways, fountains, and chimney-pieces, and, grandest of all, though not yet carried out, a design for the Freedmen's Monument to Lincoln.

Miss Hosmer is yet in the prime of life, being but forty-one years old; and we may hope that many more will yet be added to the above list of marbles before the final record of her work is made up. Her studio is said to be the most beautiful in Rome, and she occupies a leading position in the art society of the Eternal City.

SWEETEST LIPS WERE EVER KISSED.

BY SARAH E. FULLER.

EVERY charm of form and face,
Every little nameless grace,
Winning look and tone,—
Making her beyond compare,
Fairest pearl among the fair,
Does my darling own;
And, withal, to crown the list,
Sweetest lips were ever kissed.
Laughing eyes, and golden hair,
Snowy neck, and bosom fair,
Dimpled cheek and chin,—
Slender foot, and little hand,
Waist—the trimmest ever spanned—
May not always win;
But what Stolz could resist—
Sweetest lips were ever kissed.
Name not made of sunny climes,
Quote me no enraptured rhymes,
Throbbing with their praise;
Useless all—the glowing south
Never flushed a lovelier mouth
With its ardent rays;
Useless all—for well I wist
Sweeter lips were never kissed.
Parted like an opening rose,
Pearly treasures they disclose;
And her "sugar breath"
Shames the sweetest sigh that gushed
From the rose's heart when crushed
Into odorous death.
Roses bathed in morning mist—
Sweetest lips were ever kissed.

When my own their pressure meets,
Mine are all the rarest sweets
Fancy ever knew;
And their magic power is such,
That their softest, lightest touch
Thrills me through and through,
For they are—I still insist,
Sweetest lips were ever kissed.
Lightly curved as Cupid's bow,
Keener arrows they can throw,
More effective darts;
For their soft entrancing speech
Instantaneously will reach
E'en the coldest hearts;
Ice itself could not resist—
Sweetest lips were ever kissed.
Musical as rippling rill
Flowing at its own sweet will,
Is her silvery voice;
Surely 'tis an echo flung
Earthward when the harps are strung,
When the blest rejoice;
Angels eagerly might list—
Sweetest lips were ever kissed.
But in vain do I essay
Half her beauties to portray;
Words are idle all
To depict the perfect grace
Which by matchless form and face
Holds my heart in thrall;
And the dearest on the list—
Sweetest lips were ever kissed.

OUR HORSE CARS.

BY PERIWINKLE.

THE horse railroad crosses the head of our street; and sitting at my window to-night, I can see the evening car as it crawls up the rise which the street makes here; and it is a source of daily wonder, a perpetual miracle to me, that such an agglomeration of humanity as it invariably contains, can ever again be sorted into separate and distinct individualities. Inside and outside, behind and before, a struggling mass of life gasps for breath, and sways with the motion of the vehicle like one body; and as I live, there is a man riding on that little projecting piece of iron to which the horses are attached when the car is going in the opposite direction! There he goes, balancing himself on this slight foothold, first on one foot and then on the other, and occasionally jumping off and walking behind the car.

Poor mortal! what was the punishment of Sisyphus to a four-mile ride under such circumstances!

The boys here have a legend to the effect that once on a holiday the car went past the head of our street with a row of men pasted by their backs along each side of it; but I suspect this is apocryphal.

Now the car has reached the top of the hill; and as it comes out into stronger light, I see members of the human body sticking out in all directions.

"Legs and arms, heads and bodies, emerging between,
Like the drawing-room grim of the great Sawney Bean."

Methinks I hear some impatient reader exclaim, "Who the dickens was Sawney Bean?" and I will state here, for the information of anybody who cares to know, that, according to a scarce old pamphlet I once read, Sawney Bean was a gentleman of Scottish nationality, who combined the profession of a highwayman with the taste of an anthropophagist, and in his dealings with the dead contrived to make both ends *meet*, by eating up his victims from head to heel. The pamphlet further states, that in the cavern which he and his associates used for a rendezvous, and where they were captured, there was found a number of human limbs,

which had been pickled and hung up to be smoked. He was, in fact, a man who might have said, with Abou Ben Adhem: "Write me, then, as one that loves his fellow-men"—pickled.

Now the car begins to fade from sight, more, I suspect, from the effect of twilight than the rate of speed at which it is progressing; indeed, it is difficult to ascertain, at a little distance, whether a horse-car is in motion or not. Perhaps this point might be determined with the aid of a transit instrument, but I don't happen to possess one. I believe the rate of speed of these vehicles is restricted by a city ordinance to four miles an hour, but they keep well within this limit, and if I might be allowed to venture an estimate, I should say that four hours to the mile appears to be their highest rate of progression. As an illustration of this I will narrate an incident which occurred a short time since, and which has some sad features:

One of my neighbors, Bevis by name, laid a wager that he would take the car in the morning, go to his place of business, about two miles from here, come home to dinner by the same mode of conveyance, return to his store and get home again, all on the same day. Of course his friends remonstrated with him on the madness of attempting such a feat, and Mrs. Bevis was heard to say that she almost went on her knees in endeavoring to dissuade him,—a figurative mode of expression which injured wives sometimes make use of when they wish to convey the idea of superlative pig-headedness on the part of the man whose name is on the door-plate. But Bevis was proof against arguments and blandishments, and seemed one of those "whom the gods would destroy."

I saw him set out early in the morning looking fresh and hopeful. He came home to dinner, late it is true, and when he went out again in the afternoon I noticed his step was less vigorous, his clothes were crumpled, and he walked with a cane. About nine o'clock P.M. I was coming round the corner of the street when a car stopped, and I knew by the wriggling and squirming among the

passengers that somebody was going to get out. Soon six men jumped off the platform to open a passage, and the conductor and another man came bringing out a passenger apparently in the last stage of exhaustion, with his feet all trodden out of shape, the buttons twisted off his coat, his paper collar torn in halves, and his hat jammed over his eyes, while in his feeble grasp he yet retained a small fragment of a cane.

This was Bevis, and after the conductor had propped him up against a fence the car drove on. I went up and spoke to him. Consciousness had not wholly departed, for he recognized me and made signs as if he had something to communicate. I approached my ear to his lips and could just distinguish these words: "Won the wager—took me fourteen hours."

I have learned to-day the family physician thinks Bevis can be patched up a little, so as to be able to go out in the course of two or three weeks, but he says he will never be the man he was before his disastrous ride.

Sometimes, when I have had a day of leisure, I have ventured on a two-mile ride in the horse car, and I have noticed on these occasions, among other things, the alacrity with which the conductor proceeds to take the fares when there is a stoppage from any obstruction in the street. I remember, on one occasion, when the conductor had just been through, and there was a line of cars ahead extending as far into the distance as the unaided vision could penetrate, I heard a little urchin on the sidewalk call out to his comrade on the other side of the street, "What's the matter, Joe—what are the cars stoppin' for?" "O, nothin'," said Joe, "only there's a straw across the track, and they are waitin' for it to blow 'way."

I looked out of the window and saw a conductor hastily leaving his car, and a boy's leg going round a corner.

I recollect once making a practical use of my observation. I was in the car one morning when it stopped before a repair shop belonging to the company. The conductor, a new one, by the way, got off, and a workman came into the car, with an assortment of tools in one hand and a huge coil of leather strap in the other. I took the liberty to inquire what new form of torture was

about to be inflicted on the unoffending passengers, and was informed that we were to be favored with an exhibition of the mechanical process of attaching a new strap to the bell of our car.

"My friend," said I to the workman, in my most impressive manner, "you perceive this car is full of passengers. We have been a long time on the road, having traveled nearly a quarter of a mile this morning, to say nothing of the delay of stopping sixteen times, and having the harness break down once or twice. None of us had the forethought to come provisioned for the day, and we are all naturally anxious to return to our respective homes before the midnight hour chimes, which we shall be unable to do if we protract our stay in this locality until your work is consummated. Besides," I added, "the conductor hasn't yet taken the fares." The last argument had its effect. The man gathered up his tools and strap, which he had laid down, and went out on the front platform. "Where's the conductor?" he asked of the driver. "He got off for a moment," said the driver. "Well," continued the other, "I aint going to begin that work till I see him." We went on without a new strap that morning.

I suppose people who travel on the horse cars every day have observed the prevalence of balky animals in the motive power. Once it happened on one of my casual trips. I was standing on the front platform, beside the driver, when one of the horses came to a full stop, and neither persuasion nor force had any moving effect on him. His feet seemed to be fastened to the pavement, after the fashion in which a toy horse is secured to the little board on wheels.

I wondered if it could be possible that there was a large magnet under the pavement which exerted a powerful attraction on his shoes; but, before settling down on this theory, I thought it prudent to ask the driver what the trouble was. "Balky," was laconic reply. "But," I continued, "I should think such an animal would be unfit for car service. Why don't the company dispose of him?"

"Why, look here, sir," said the driver, "the company wouldn't sell that hoss for five times what he cost. I sometimes take

three freights on one trip with him. You see, when he stops, the conductor takes the fares, and, after a while, the passengers get tired of waiting and get out and walk. Then we start up again, the cars take on another freight, and we proceed till the boss has another tantrum, and so on to the end of the route."

"Well," I remarked, "I haven't seen many horses who are taken in this way in other vehicles lately. I suppose there is a reason for it, eh?"

"I should say so," replied the driver. "You bet you don't see many balky horses laying around loose, not if the company knows its business. Its agents are on the lookout, and if they get sight of such an animile they go for him at any price. They have bought a good many, and by next spring this line will have one for each car."

By this time the passengers had begun to thin out, and I went inside and took a seat, musing on the old truism that nature makes nothing in vain, and I thought how some learned professor, after patiently watching the habits of a tiny animal, at last arrives at the knowledge of its sphere of action—something which the little animal knew all along—and gains great credit for his discovery, and I queried if my name would figure in scientific journals, when, at some future time, I should make known to the world the discovery that balky steeds were made for horse cars. I have heard there are horse railroads ten miles in length extending from this city. Ten miles in a horse car! Imagination falters in attempting to depict the wearisome horrors of such a journey!

I sometimes try to fancy a car, with its load of passengers, setting out on that line, and then, looking into the dim future, I anticipate the change that will take place in the appearance of that car and its occupants by the time it reaches its destination.

I imagine myself standing at the terminus of the route, when a crazy, groaning vehicle, with the paint all worn off, the glass out of the windows, and the rear platform hanging loose, and flapping up and down, is driven up. The horses, mere aged skeletons, fall down dead as soon as the driver gives the last turn to his little crank; and the driver and conductor, who were in the lusty prime

of manhood when they started, are now gray-haired, trembling dotards.

I look into the car and see the ruddy-cheeked matron changed to a wrinkled bel-dame, the infant in arms grown to a bearded man. But this is too harrowing. I crave permission here to lay down my pen and wipe away a couple of tears.

As I resume writing I hear the tinkle of a bell, and know that another car is going past in the darkness, with its living freight packed like figs in a drum. Oh, it is wonderful the meekness with which the great American public submits to hazard and inconvenience in the matter of travel! It is blown up in steamboats, it is smashed up on railroads, and suffocated on horse cars. Occasionally, after some wholesale slaughter, there will be some pottering about an inquest, but this interest is manifested chiefly by those who do the standing around in the community, while men of energy and sagacity seem too busy to give the subject much attention, and the whole business commonly ends like Hamlet's reading in "Words, words, words."

In order to reach his place of business, I verily believe that Jonathan would submit to be disjointed and packed in a tea-chest, if, after he was bundled into his store, by any possibility he could be put together again and made to move round long enough to catch "that ere dollar" which is rolling over his counter. But although Jonathan is an exemplar of patience in some respects, yet he is capable of being aroused, and under a sufficient pressure he has been known to put things to rights suddenly, as when he takes time to go to the polls and break up a ring; and sometimes when ruffianism is outrageously rampant he puts up his shutters and organizes a vigilance committee.

So I indulge the hope that, some day in the present century, after he has been scalded and ground to rags, and suffocated, and sat on sufficiently, he will find time to investigate the means of travel in this enlightened republic.

Now the tinkle of the bell sounds faint in the distance, and in imagination I follow the car along the dark road, where the houses are thinly scattered; past orchard and meadow, and old pastures, with their tottering stone walls and gloomy clumps of straggling pines. I think of pleasant homes, where the hearth fire burns brightly, and the lamps are lighted, and the tea-table spread; pleasant homes, whose light, and warmth, and cheer seem enhanced by contrast with the dark, chilly night without, and as the tired passengers get out one by one, I wish them a happy greeting as a compensation for the miseries of a horse car.

Department of Physiology—Our Sanitarium.

The truths of Physiology should be inculcated and enforced early and earnestly, and with the emphasis of high religious duty.—*Youmans*.

WILL IT PAY?

BY PRESIDENT TUTTLE, OF WABASH COLLEGE.

THIS is a great question, and it is very often repeated. That it is a great question in Wall Street is evident from the fact that in some sense or other its vast business hinges on it. If a man buys this stock or sells that, if he "buys short" or buys at all, if he deal in Erie, or Northwestern, or Union Pacific, the question at the bottom and the beginning of the transaction is this, "Will it pay?" A certain tea firm in Philadelphia having too much unoccupied capital cast a look over the stock market. By some means their attention is directed to "Reading" stocks. They wish to make money, and the very question to be settled is that which heads this article. These gentlemen did not demand an absolute certainty in the matter, but after all, their venture is based on the answer which they are able to give to the great question.

Now I do not propose to give a very learned answer to the question, nor to discuss it abstrusely. Those who want that kind of discussion can find it easily in "the books of the few." My object is to reach "the many" with this question. That it appeals to a sensitive nerve in the public mind is very certain, since in the selection of the pursuits in life by parents for their children, or by their children for themselves, this question exerts a mighty influence.

Residing *somewhere*, years ago, was an active man, full of life, of large brain, strong judgment and will, who was looking about for a *business*. "What shall I do?" he asked himself, and others also. If *work* was what was wanted, why not dig on the railway track with "Patrick" or "John Chinaman?" That was not all that was wanted, since a man may work at employments that do not pay. So this man, when he asked "What shall I do?" meant by it, "What can I do that will *pay*?" At last he finds a business, and drives it with all his might. The bank-men scrutinize his balance and say "his business pays!" He

enlarges his business, he increases his ventures, he redoubles his efforts. Money rolls in upon him. He buys one property after another. What he touches turns to gold. He has no proper Sabbath, and business encroaches on sleep. People look at him with amazement and exclaim, "What a great business man! whatever *he* touches pays! he is a millionaire, and can control legislatures, buy railways, and great blocks in our great city!" By-and-by, in middle life, the doctors shake their heads over the great man's queer adventures and sayings. The great brain has been working like the engine of the waterworks, night and day, seven days each week, and fifty-two weeks each year. It is true he went to Saratoga a week or two each year, but his whole education had unfitted him to make any good use of such recreation. He is like "a fish out of water;" and even on the piazza of Congress Hall, and by the gushing stream of Congress Spring, he thinks of stocks, and banks, and city lots, and money. The great brain gets no rest. If he goes to church, it is all the same, and by-and-by they say, "He is failing! something is wrong! it is very curious!"

The fact is, the great brain has given out entirely. The doctors talk very learnedly and say "the brain has softened," as if that would soften the sad thing. "The brain has softened,"—to be sure it has. That skull, full of fine forceful nerves, the means by which the man planned, and that very wisely and largely, "putting this and that together" so shrewdly and easily, and also so profitably, has become a bunch of worn-out nerves. What it means to have "the brain softened" I am not able to describe, only I perceive that this man talks incoherently and plans foolishly. His neighbors shrug their shoulders and say, "He is not the man he used to be!" And what did the doctors say was the matter? "The brain is softened?" And what is that? Is he not a very rich man? Has he

not an immense estate, with city houses, and great farms in the country, and fine horses, and huge bank balances? and yet you say "his brain is softened!" Now, money is good, and lands are good, and these fine city blocks are what a great many people would like to have, but of what good are they to a man whose "brain is softened?" His friends and hired servants care for him as they would for a little child or an idiot; they do not consult him as to what he shall eat, nor when he shall ride, nor what of his property shall be sold, nor ask him "how he enjoys this," and "how he enjoys that." "*Enjoys!*" what a word to apply to a man whose "brain is softened," as if he were capable of enjoying anything! What shall it profit a man to gain great riches, and yet have the doctors say "his brain is softened?"

This may seem trifling, and yet it is not so meant. I am as serious as I ever was, and ask the question of ten thousand men in business who are doing just what this man did, and of ten thousand young men who stand ready to imitate the same example, "*Will it pay?*" Look at that man whose incessant toil with his brain to carry his plans to a successful conclusion has ended in great wealth, but a softened brain. That man to get this wealth has abused his brain worse than these engineers do their locomotive engines. They run their fine machines a hundred miles or

more in a day and then let them lie still for many hours. The fires go down, the panting lungs of the fire-horse are quiet, and his mighty limbs are in repose, and then he is ready to run his race again; but this man of business does not stop. He toils without rest, he works without good honest sleep, and does it for days, weeks, years, and then his brain is softened, or he dies of heart-disease, or consumption, or some other disease which was but an expression of God's displeasure on his way of doing business.

This rude sketch is written by the side of a great railway as we wait our train, and its rush and roar remind one of its *Kings*, and as I recall the worn-out brains it has cost, and also what our mad rush for business does in wearing out men, I ask seriously, DOES IT PAY?

[Dr. Tuttle writes most sensibly. He evidently believes in Phrenology. We wish to add a suggestion. These brain-wreckers, to whom he refers, nearly all resort to alcoholic stimulants, and to narcotics "to quiet their nerves," which is only "adding fuel to the flames." These men, nearly all of them, drink and smoke, and die or break down from five to fifteen years *sooner* on *that* account. O the foolishness of such suicides! Why will men allow their vanity and ambition to run away with their health, their strength, and with life itself?]

AGUE AND FEVER.

BY R. T. TRALL, M.D.

EVER since the days of Hippocrates, several centuries before the Christian era, intermittent fever (in common parlance, fever and ague) has been regarded as the type of all fevers; hence whatever theory obtains respecting its essential nature, controls or modifies the practice throughout the whole range of febrile diseases. And the principle underlying this statement may be carried still further; for ague and fever is in reality a type of all diseases, of every form and nature. There is not a single symptom pertaining to any disease that can be named, excepting such as are peculiar to structural disorganization, which may not attend intermittent fever. It is also the simplest form of disease known, speaking nosologically, for the reason that all of its states and stages are clearly marked, the cold, hot,

and sweating stages of each paroxysm distinct, and the intermission prominent. Moreover, it has been studied more critically, and written about more extensively by the leading minds of the medical profession, than any other malady, while experience in treating it has been almost unlimited. It would seem, therefore, that if the medical profession knows anything about any disease, or can treat any disease successfully, its name should be ague and fever. Nevertheless, the simple question, "What is intermittent fever?" is among the unsolved medical problems of to-day.

It is very true that physicians do not, in most cases, find much difficulty in curing it. It is simply a question of dose. A hundred "remedies" have arrested it at once. Bleeding, brandy, opium, niter, antimony, capsicum,

the cold douche, the vapor-bath, and the most heterogeneous drugs and processes, have been successfully employed in curing intermittent fever. But here is just where the trouble begins. *The disease should not be cured.*

CURRENT REMEDIES.

Quinine and arsenic are regarded as "specific" remedies. In recent cases either drug seldom fails to "break it up," whatever *break-down* may result to the patient. When the "Army of the Potomac" was encamped in the vicinity of the Chickahominy Swamps, the soldiers were swallowing sixteen thousand dollars' worth of quinine per day, with corresponding rations of whisky, as *preventives* of intermittent fever. And it is true that certain drugs which are regarded as specific curatives for particular diseases are just as certainly specific preventives. This problem is easy of solution, and it involves the *modus operandi* of all medicines. Let us refer to the authorities: ALLOPATHIC AND HOMOEOPATHIC PRINCIPLES.

Professor Martyn Paine, M.D., of the New York University Medical School, in his "great work" entitled "Institutes of Medicine," in treating of the rationale of curing diseases with drug remedies, says: "We do but cure one disease by producing another." Here Allopathy and Homœopathy meet on the same plank of the same platform. Hahneman teaches the same doctrine precisely—that the primary disease is cured by inducing a drug disease. The law of "*similia similibus curantur*," and the law of "*contraria contrariis curantur*," although so different in sound and words, are identical in sense and meaning. The real question between Allopathy and Homœopathy is not, which is the true law of cure, but whether big or little doses are best for the patient.

In this identity of the "heteropathic" and "pathogenetic" plans of medication we have the key to solve the whole mystery of curing or preventing ague and fever by means of arsenic, quinine, or any other drug medicine.

DRUG TREATMENT.

A drug disease, whether occasioned by huge doses of crude materials, or by infinitesimal quantities of diluted potences, necessitates a new series of vital actions, changing more or less the existing order of symptoms. The original disease is "cured," and a new disease exists. When large doses of quinine, or arsenic, or any similar drug have been employed, or when small doses have been repeated for a long time, the whole system becomes so drug-diseased (and drug-cured) that the affection

superinduced has been named in reference to its cause, as *quininism*, *arsenicalis*, etc., just as chronic or prolonged drunkenness is called *alcoholismus*.

The effect of *quininism*, etc., and the ultimate effect of all "anti-periodics," is to cure the disease without removing its cause—just what never should be done. Diseases should not be cured. The *causes* should be removed that the *patient* may be cured. Quinine and other "specific" drugs subdue the efforts of nature in their attempt at purification and leave the impurities or poisons within. The result is seen in torpid livers, enlarged spleens, and general debility. All persons who have long resided in malarious localities are aware of the frequency of "ague-cakes" (enlargements and indurations of the spleen, or liver, or both) in patients whose intermittent fevers have been "cured" by large doses of quinine or arsenic.

In thousands of cases these organs are nearly ruined in functional activity for life. In the Health Institutions, patients who have been treated and "cured" with "specific" doses, months or years previously, and who are being treated for dyspepsia, liver complaint, or general debility, are very liable to have several paroxysms of ague and fever after a few weeks of Hydropathic treatment. And this re-appearance of old drug-cured disease is always regarded as a favorable indication. It means that the depurating organs whose action was arrested in the original attempt to purify the body, being now placed under favorable conditions, are renewing the attempt. But now the system has a double task to perform. It has not only to get rid of the original impurities, but to expel the drugs. If henceforth the patient is properly managed, the process of purification will be completed and the health restored, *minus* the loss of the vitality which has been expended in getting rid of the medicine. The *patient* will be cured. As to the disease, it will be neither "cured" nor *killed*, but, the causes being removed, it will be *nowhere*.

I look upon this whole proceeding of curing ague and fever with drug poisons just as I should look upon the attempt to purify a filthy central building in a block of tenement houses by shutting all the doors and windows. The adjacent apartments might be relieved at once of unpleasant odors, but the noxious miasms would be there; and, sooner or later, the existence would be manifested in some form of pestilence. In the case of ague and fever,

cured by quinine, the acute disease would be changed into a chronic morbid condition, while the vital energies are wasted in the expulsion of the medicine.

LOCALITY AND CAUSES OF THE DISEASE.

Intermittent fever is known to prevail (except in sporadic cases) only in districts where there is a large amount of vegetable matter in a state of decomposition, and this occurs more especially in times of drouth. In dry seasons rotting wood and other vegetation, usually innocuous because under water, is exposed to the atmosphere, which it attains with the emanations of decay. We have no evidence that any amount of decaying vegetable matter *on a dry soil*, though it may be very unwholesome, is especially conducive to the intermittent form of fever. Moisture is an essential factor in the causes. But all swampy lands are more or less productive of this type of fever in dry seasons, and the prevalence of intermittents in their vicinities always corresponds with the quantity of decaying organic matter.

Another source of the disease not often thought of, and seldom alluded to in medical books, is rotting wood and other decaying vegetable matter in the cellars and door-yards of houses which are situated in damp places. If wood, or any other decaying vegetable matter, and water are allowed to accumulate in the immediate vicinity of houses or stables, the water will become stagnant, and malarial gases will be generated, causing intermittent fever in the occupants of the houses, and a more obscure, though analogous affection in the domestic animals.

Many farmers wonder why the members of their families are sick, and how their domestic animals become diseased, when, if they would only look at the stagnant water, decaying offal, and accumulated excrement in the immediate vicinity, they would find the explanation in an ever-present malarial atmosphere.

The malaria of swamps and other places is sometimes carried mostly in a given direction by the prevailing winds or breezes, so that persons residing a mile or two distant, and in high altitudes and salubrious localities, are more subject to intermittent fever than are those who reside in their immediate vicinity. It is, therefore, of much importance in the neighborhoods of malarious places, or in districts subject to this disease, to ascertain the prevailing atmospheric currents before constructing buildings, either for human beings or animals.

It may be an interesting question with many who are obliged to reside in malarious locali-

ties, At what hours of the day or night is the atmosphere best or worst? There can be no doubt, I think, that early and late in the day are the worst times to be exposed. From day-dawn until a little after sunrise (and still later in cloudy or damp weather), and from sunset until a little after dark, the air is damper, heavier, and more loaded with malarial emanations, which the sunshine and heat of the day dissipate and destroy, and which the colder air of the night condenses and keeps down to the surface of the earth. Those who live near any source of pestilential miasmata would do well, as a preventive measure, to avoid exposure as much as possible during the hours above indicated.

But it may be said that persons must breathe such air as surrounds them, that the malaria will pervade the indoor as well as the outdoor atmosphere; and that, therefore, nothing is gained by remaining within. The objection is well taken; but by keeping the air of the apartments occupied during the above hours warm and dry with a brisk fire (even though the time be July or August and the thermometer at fever heat), the objection will be obviated.

TREATMENT.

There is no acute disease that can be more successfully treated without drug-medicines than ague and fever. During twenty-five years of Hygienic practice I have never failed to cure the patient suffering of any form of intermittent promptly and permanently; and in no case, treated hygienically from first to last, has there been any of the ordinary complications or *sequela*, ague-cakes, liver complaints, shattered nervous systems, deafness, etc.

The main point and the universal rule in medicating all cases is: to keep the temperature and circulation as nearly balanced as possible during all stages of the paroxysm. On the first appearance of the symptoms of the cold stage, the patient should have hot fomentations applied to the abdomen, bottles of warm water or something equivalent to the sides and armpits, and warm applications to the feet. By these means the duration of the cold stage will be lessened, the severity of the hot stage diminished, and the entire paroxysm abbreviated and rendered milder.

During the hot stage the patient should have a tepid ablution over the whole surface of the body, to be repeated once in two hours until the hot stage subsides. The temperature of the water should have reference to the degree of febrile heat, varying from moderately warm to cool, or from 90° to 70° Fahrenheit. In

severe cases, attended with a great degree of superficial heat, the wet-sheet pack for an hour is preferable to the ablutions.

In the sweating stages the skin should be gently wiped with damp, soft towels, and then wiped very dry, in order to remove from the skin all of the excreted matters. This process should be repeated every hour or two, according to the degree of sweating.

Headache may attend any stage of the paroxysm, but is usually most severe in the hot stage. It requires the constant application of cold wet cloths to be frequently renewed. Nausea and sometimes vomiting may occur at any time. Frequent sips of warm water are all the medication required, unless attended

with cramp in the stomach or colic, when hot fomentations should be applied.

During the intermission the patient may partake moderately of any simple food, but not more than twice a day. In quantity he should incline to abstemiousness. As the liver is always more or less congested, overloading the stomach, even with the best viands, is sure to aggravate the subsequent paroxysms, and may occasion a relapse.

Gruel (without salt), canned berries (without sugar), good apples, Graham crackers, mealy Irish potatoes, and wheat-meal bread (without risings) constitute the best and a sufficient dietary, so long as the febrile paroxysms continue.

QUANTITY OF FOOD.

PEOPLE often ask us, "What is the proper quantity of food?" This depends very much on what the food is, and who the person is, and what his pursuits are. We doubt not that most people who have the means eat a third more than they really need, and we venture the assertion, that if each man of good constitution and health could begin at twenty-one, having been properly fed to that time, he might live to be seventy or seventy-five years of age and not need the aid of a doctor at all. We believe that nine out of ten could do so. But just how a person should live to avoid entirely all causes of disease, no man, perhaps, is wise enough to prescribe. It may be safe to assert that most people who are healthy and hearty eat a little more at every meal than they should. That sense of fullness, that extra heat of the face, and the inclination to be sleepy after a meal, show that it has been too heavy. Most people eat too rapidly, and take in more food than they are aware of. The appetite is not allayed, and they eat as long as they can hold it, because it still tastes good.

Suppose one were to eat parched wheat or corn; were obliged to masticate it, moistening by the saliva, having no coffee, tea, or water to "wash it down," he would not be likely to eat too much for several reasons, the chief one being, that while eating so slowly, his stomach would begin to appropriate the food, some of the juices of the food would be absorbed and carried into the circulation and

the appetite would be partially satisfied before he had finished. Moreover, there would be a mechanical satisfaction on the part of the stomach. It would take a man perhaps three-quarters of an hour to eat as much of that kind of food as would satisfy him. Then he would get exercise enough for his teeth, so that they would be healthy, and all the glands of the mouth would do their work. The stomach would come into healthy action, and the person would be satisfied as soon as he had eaten enough. Doubtless he would eat but little more than half as much in that way as he would to have the wheat ground and made into mush, that could be eaten without the use of the teeth, and a surfeit obtained before the stomach had time to respond.

Persons, generally, who are fat, and are anxious to reduce their flesh, can do so by eating a third less of food than is their customary habit. Some would have to reduce the amount one-half to bring them to a proper standard. This plan would require self-denial; but people undergo, through self-indulgence and its consequent vexation and annoyance, ten times more to mitigate or rid themselves of trouble than would be necessary to avoid it altogether. A lady came to us for a phrenological description whose face was thickly covered with pimples, fiery red blotches, like mosquito bites. Thinking we could hardly do her a better service, we asked, at the close of our phrenological de-

scription, if she would like to be rid of those pimples. She started with delight and hope, and said, "Certainly; what shall I put on?" We replied, "Nothing; but eat less sugar and butter, eat lean beef and fruit, and keep clear of griddle-cakes and their accompaniments for three months, and your face will be clean and fair." In one month after she came in without a pimple on her face, to show us what virtue there was in our simple prescription. She had doubtless been buying cosmetics at a dollar a bottle for years, greatly

to the advantage of the dealer. Like the woman of the Scripture, she became no better, but rather worse.

We eat too much. We eat the wrong articles of food. We have pimples, bilious fevers, headaches, dyspepsia, kidney complaint, liver difficulties, and rheumatism. The old rough statement that "men dig their graves with their teeth," has more truth than poetry in it. If men would use their teeth properly, they could postpone the time for having their graves dug for many years.

Our Country and Its Resources.

That which makes a good Constitution must keep it, viz., men of wisdom and virtue; qualities that, because they descend not with worldly inheritance, must be carefully propagated by a virtuous education of youth.—*William Penn.*

FISH CULTURE IN AMERICA.

A BRIEF HISTORY OF THE ART.

THE art of breeding fish artificially has long been known and practiced in other lands; but it is only within a few years that it has assumed any importance in this country. Fish culture has always been practiced by the Chinese as far back as we have any knowledge of them. Their fish are reared in the greatest abundance, and form a very large part of the animal food of the people. The art was also practiced extensively by the Romans. Lucullus, we are told, "at his house at Tusculum, on the shores of the Gulf of Naples, dug canals from his fish ponds to the sea. Into these canals fresh-water streams were led, and pure running water thus kept up. Sea fish that breed in fresh water passed through the canals into his ponds, and stocked them with their young. When they attempted to return to the sea, flood gates barred their egress at the mouths of the canals, and while their progeny were growing, the parent fish supplied the market." The value of Lucullus' fish ponds was estimated at a quarter of a million of our money.

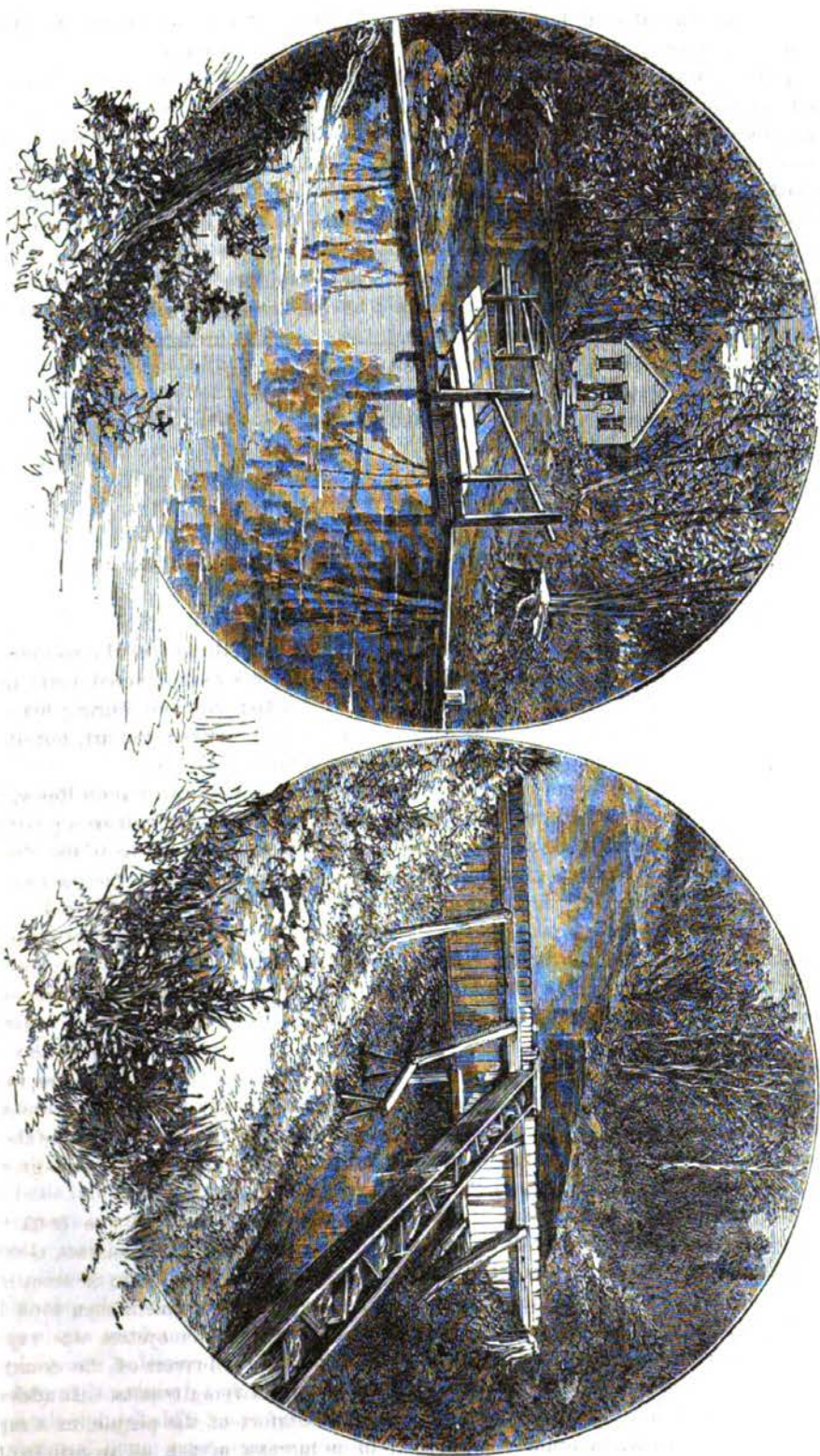
After the fall of Rome we do not hear much more about fish culture until the fourteenth century, when a monk of the Abbey of Reome is said to have discovered the art of breeding fish in wooden boxes, with wicker work at the ends, and sand upon the bottom,

which is something like the modern arrangement. It was re-discovered again in 1763 by Jacobi, a German, and during his day many gentlemen practiced the art, but it was not popularized.

It was reserved for Joseph Remy, a French peasant, to make fish culture a practical business, and to demonstrate to the French people, and to the world, the feasibility of restocking barren rivers with fish. He knew well that fish were prolific enough, and he set himself to discover why it was that so many of the streams of France were impoverished, or entirely wanting in fish. He ascertained that the scarcity was owing to the immense amount of eggs that never came to life, the enormous quantity of fry that were devoured by enemies, and the hard fishing of the streams before the survivors had time to grow to the reproductive age.

It was only so recently as 1849 that the labors of Remy, and his assistant, Gehin, were brought to the knowledge of scientific men. The French Government then took hold of the matter, and the system was rapidly extended to all the rivers of the country with the most gratifying results. It added much to the comfort of the people, in a rapid and cheap increase of fish as an article of food; and, in some cases, little fortunes were made

MEREDITH VILLAGE, N. H., FISH-BREEDING WORKS.



by intelligent farmers who had suitable waters for the propagation of fish. The efforts of Remy culminated in the erection of a great fish hatching establishment at Huningue, under the direction of Professor Coste.

Great attention is now paid to the business in France, Germany, and Great Britain, and a marked improvement has taken place in all the rivers favored with the artificial propagation of fish. The salmon streams of Great Britain and Ireland, once greatly impoverished, are now steadily increasing in the yield of this excellent fish, and salmon and green peas are a favorite dish once more within reach of laboring people.

In the United States fish culture has been so far tested that we may speak confidently of its entire success. The attention of our law-givers is so far awakened that we shall soon have all the legislation and the money that is needed to stock our barren streams with alewives, shad, salmon, and other anadromous fishes, and fish will become the cheapest animal food.

HOW THE WATER HAS BECOME DEPOPULATED.

The streams and ponds upon every farm can be utilized and made more productive in food than the land. These waters have had no intelligent husbandry until very recently. The effort of every fisherman has been to catch the last fish, and so far as the shad and salmon are concerned, the last fish has been caught in a multitude of streams that once swarmed with them. The warfare upon these fish has been most destructive because they were most coveted, and their large size made them more easy to capture.

When the country was first settled, all the streams of any considerable size east of the Hudson were full of salmon, and all the streams north of Florida were well stocked with shad and alewives. Shad are still plenty in the Southern rivers, but in the streams east of the Hudson they have greatly diminished, and in most of the smaller streams they have entirely disappeared. The salmon were once so plenty that they formed a very important part of the food-supply of the people, and the old tradition that it was stipulated in the indentures of apprentices that salmon should only be furnished a certain number of times each week, is found to be an historical fact.

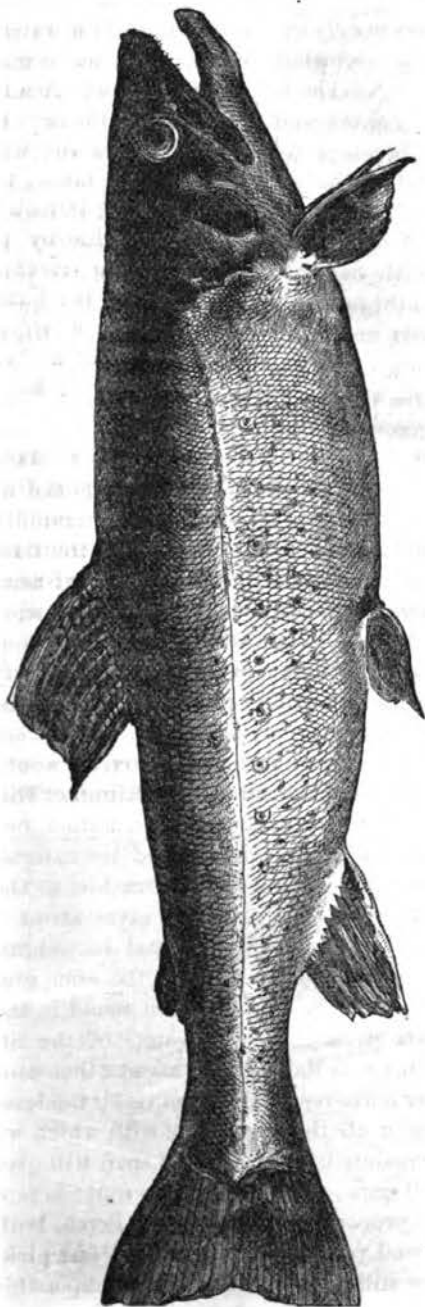
At the fisheries on the Connecticut River, shad could not be bought without the taking of a certain number of salmon as a make-weight in the bargain.

The depletion of these streams has been occasioned mainly by the damming of the waters for manufacturing purposes. This began very early. The first settlements were made near the shore, and not far from the outlets of the brooks and rivers. These were dammed to furnish water-power for grist mills and saw mills, which were among the first necessities of emigrants settling in a country covered with heavy timber. These dams prevented the fish from ascending to their spawning beds, and they very soon became extinct. The larger streams were the last to be obstructed, and the fish were preserved in them for several generations. The salmon disappeared from the Connecticut about sixty years ago, when the river was dammed at Turner's Falls, and the shad had been rapidly diminishing for thirty years—since the dam was put in at the Hadley Falls, until artificial propagation was begun, about six years ago.

THE FECUNDITY OF FISH.

Fish are so enormously prolific, that if any considerable portion of the spawn could be protected, and grow up to adult life, the sea would be full of them, and the rivers would hardly be navigable for their multitude. This fecundity is not a matter of speculation, but has been accurately determined by naturalists who have given their attention to the subject. The female salmon gives about a thousand eggs for every pound in weight, and the speckled trout about the same proportion. The Schoodic salmon, found in the great lakes at the head-waters of the St. Croix River in Maine, yields about a thousand eggs for a five-pound fish; and this is the least prolific of all the salmonidæ with which we are acquainted. A five-pound shad will give 100,000 eggs. The alewives are quite as prolific in proportion to their size. Perch, both white and yellow, are very prolific, and pickarel are still more so. It is quite impossible to exterminate them from any water where they once gain possession, except by turning off the water and draining the pond and drying the bottom. This fish has the peculiarity of producing a very much larger proportion of females than males. The sea fish are still

more prolific. One sea fish which frequents our rivers has been known to yield two hundred pounds weight of roe, making 7,000,000 eggs. A single cod-fish has produced 3,400,-



BROOK TROUT.

000; a flounder 1,200,000; a sole 1,000,000; mackerel 500,000; herring 35,000; smelt 86,000; blue fish, striped bass, weak-fish, Spanish mackerel, bonetas, menhaden, are known

to be enormously prolific. The menhaden, known also as white fish, bony fish, and mossbunker, is almost the only fish that has not been diminished by the ceaseless warfare made upon them. This fish has been captured for manure ever since the first settlement of the country. For twenty years or more it has been taken for its oil, and only the refuse used for a fertilizer. It is taken all along the coast, from the Virginia capes to Maine, with seines and purse nets, and the most ingenious devices of the fisherman's art. The Long Island and Connecticut shores swarm with fish factories, and the perfume of their industry is never wanting from the summer breeze. Not far from 140,000 tons of this fertilizer are made every year, and 1,400,000,000 fish are captured to keep these factories running. Notwithstanding this terrible drain upon the menhaden, it is not perceived that they have diminished in numbers. Hauls of a hundred thousand at a single fishing-place in a day are not uncommon, and the rewards of this industry are still abundant.

This fecundity of the finny tribes is wisely ordained to meet the enormous waste of life that occurs from their natural enemies, and to provide abundantly for the wants of the human family. A large part of the spawn escapes the milt of the male, and only serves for the food of fishes. They prey upon their own ova, and other species come to the spawning beds as to a banquet. Then, when the young fish come forth from the shell, every tribe waits to devour them. In the natural process of growth it is estimated that not more than three fish from a thousand eggs reaches the period of adult life, when it can reproduce its kind. Now, if art can come in and forestall this destruction, the fecundity of fish will soon fill any water that is suitable for their growth. The art of fish culture consists in guarding the ova and fry against their natural enemies. It is now well known even to tyros in fish culture that the impregnation of fish eggs is a purely external act. The male either deposits his milt at the same instant with the shooting of the spawn, or immediately afterward.

TROUT RAISING.

To illustrate this more fully, we will describe in brief the process of breeding a trout, from the spawn until he is fit for the table.

The details for the management are the same for all the salmonidæ. To secure breeding fish at the spawning season, it is necessary to have ponds constructed for the purpose.



SECURING THE SPAWN.

They should be made with flumes, screens, and gates, or flash-boards, so that the operator can have complete control of the water, and fill his ponds, or draw them off at pleasure. Three or more ponds will be needed for this purpose. One for the large breeding fish weighing half a pound and upward, a second for the yearlings, and a third for the fry, when they are turned out of the hatching boxes. These ponds may be of large or small capacity, according to the purpose of the breeder. Very small ponds will do for an amateur who wants simply to raise a few thousand trout for his own table. But if he means business, the ponds should be well made, and have a copious supply of water. A few breeding trout may be kept in any copious spring, and if the outlet be furnished with a good gravel bottom, the trout will get ready to spawn, and at the right time they can be captured upon the bed and stripped for their spawn and milt. The spawn so taken can be developed in the water that flows from the spring in a

box prepared for the purpose, like one of the hatching boxes described below.

A HATCHING HOUSE.

This may be a cheap shed, or a well-built house, with shingle roof and cemented walls and floors. The latter is the best in the end. A leaky roof will injure the spawn, and if the walls are not well made, rats and mice will burrow in them and destroy the spawn. The essential things about the hatching house are a supply of spring water, a filtering box, and the hatching troughs.

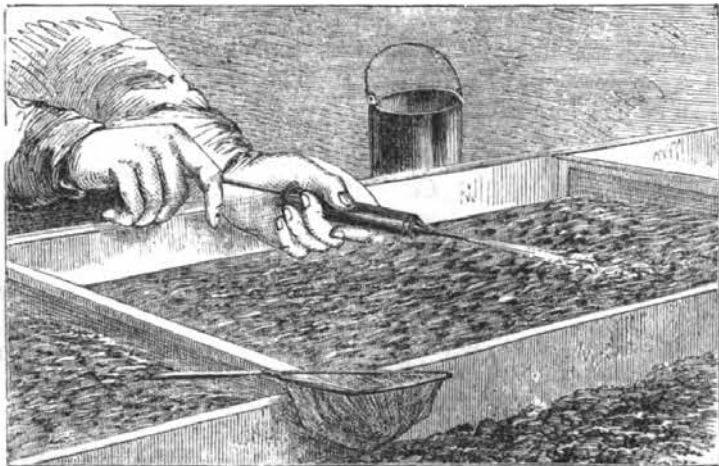
THE WATER SUPPLY

is a matter of the first importance, and we

should advise no one to attempt trout raising who has not a copious spring of nearly uniform temperature and constant flow. If brook water is available for the ponds, much less spring water will be needed. Water filling a two-inch pipe will hatch 100,000 eggs or more.

THE FILTERING BOX.

This may be inside the building, or with-



FEEDING YOUNG TROUT.

out. It is better to be within, as it is more conveniently arranged. The purest spring water needs filtering to fit it for the incubation of the eggs. The box should be about

sixteen inches square and eight feet long, open at the top, and fitted to the side of the building at the upper end. It should be raised as far above the floor as the height of the spring will allow, if you wish to economize space in the building. Frames of the size of the box are made double for the purpose of holding filters of coarse flannel cloth, through which the water is strained. The double frame prevents the necessity of using tacks to hold the strainers, and save much time in changing them. Six or eight of these filters are needed in the box, and they should be changed as often as they get dirty. The best way to clean them is by drying, and then rubbing them with a soft brush. One or more leaders are used to pass the water from the filtering box into the

HATCHING TROUGHS.

These may be made of stout pine boards one and one-half inch in thickness, fifteen in width, and twenty feet or less in length. They ought to be raised about three feet from the floor. They should be divided into squares eighteen inches in length, and fitted with movable strips about two inches in width, so that the water may be controlled at pleasure. Into these apartments put screened gravel, about one-quarter inch in diameter. The gravel should, however, have been boiled to destroy all insects, and should cover the bottom about one inch and a half. The eggs should be placed upon this gravel, and the water kept flowing over them about half an inch in depth.

COSTE'S BOXES

are the invention of M. Coste, Professor of Embryology in the College of France, and have been used for two years at Dr. Slack's Troutdale ponds, and at the Poheganut Trout ponds near Mystic Bridge, Conn., and are found to be a great improvement upon the common hatching trough. The eggs lie upon a grille of glass rods, and can be taken out and cleaned without injuring them. Each box holds about 1,500 eggs, and they are easily arranged in flights upon a stand. With this apparatus and a convenient stream of water, the trout hatching can be brought into the house or the conservatory, and made a constant source of entertainment and instruction to the family and to guests.

THE IMPREGNATION OF THE SPAWN.

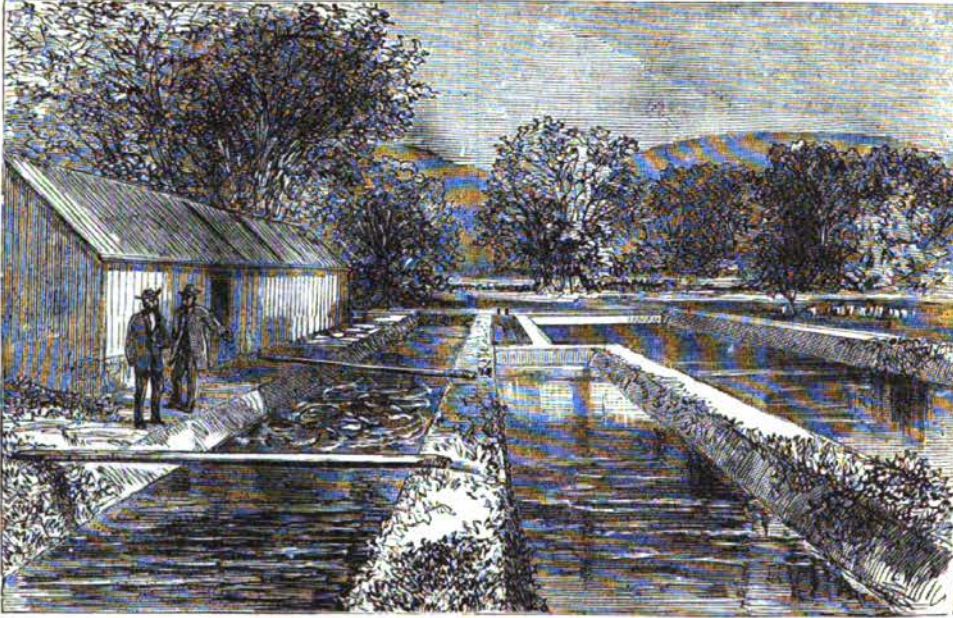
The spawning season in this latitude begins about the first of November, and continues six or more weeks. For some weeks previous the trout are noticed upon the beds that have been prepared for them, at the upper end of the pond, in the sluice way. They



ALEWIFE.

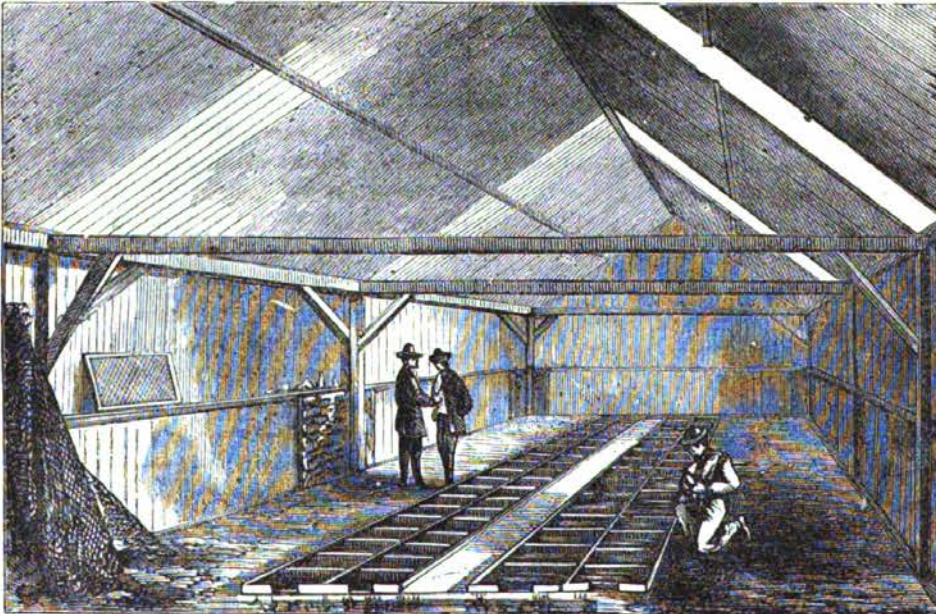
brush the gravel with their tails, and the sediments are carried off by the current. They soon pair and visit the beds in couples. This is an indication that the fish are nearly ready to spawn. The water is drawn down so that the trout can be taken with a scoop-net, and the ripe fish are selected according to

the best judgment of the breeder. They are put into a large can holding six or eight gal- | pressure the eggs flow out in a constant stream, like shot from a bag. If the operator is skill-



TROUTDALE (N. J.) FISH PONDS

lons, so that they need not suffer while they are waiting for manipulation. A spawning pan, holding four or five quarts of water, is | ful, it will occupy but a few seconds, and the fish is immediately put into a large can of water unharmed. The milter goes through



TROUTDALE HATCHING HOUSE.

placed near the can. The operator removes | the same operation as rapidly as possible, and a spawner to this pan, and by the gentlest | the water is gently stirred with the tail of the

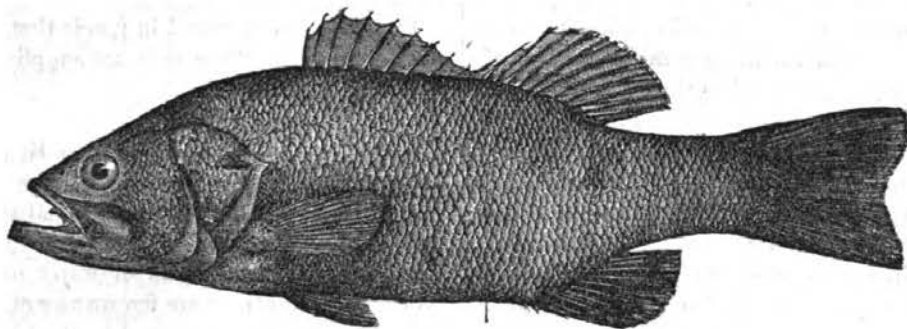
fish to mingle the milt and spawn. The ova remain in the pan about a half hour, and are then washed by allowing pure water to run over them. They are immediately removed to the hatching boxes, where water is kept flowing over them until they are hatched.

PERIOD OF INCUBATION.

This depends upon the temperature of the water. At 50° they hatch in fifty days. Each degree of higher temperature shortens the time five days, and each degree of lower temperature prolongs it five days. Breeders differ somewhat in their views of the best temperature for hatching. Seth Green puts it at 45°. Mr. Wilmot keeps his water down to near 34° from choice, and uses brook water in preference to springs. It is generally admitted that a lower temperature than 50° is desirable. I should keep the water between 38° and 45° if I had perfect control of the

trout, or several thousands of fry just beginning to feed. It is always best to deal generously with a brook in putting in the seed. A hundred dollars is none too much to spend in giving the water a good start. This will buy, at present prices, from fifteen to twenty thousand fry, or two hundred two-year old trout. No fishing should be allowed for four years. If the stream already affords a few trout, nothing more may be needed than to stop the fishing for two or three years.

The stocking of streams with salmon and shad is the appropriate business of the State legislatures, and nothing need be said upon that subject here. This is already done for the Hudson and the Connecticut, with the most gratifying results. Five crops of shad fry have been put into the Connecticut, and there has been a great increase in the numbers and in the quality of the fish taken.



BLACK BASS.

temperature. It requires some acquaintance with the water, the hatching house, and the climate to do this perfectly. As long as the eggs do not freeze, they will not be harmed by the cold. The limits of this article forbid any particular description of the development of the ova, their care and cleansing, their hatching and feeding, their treatment in the nursery and in ponds until they become yearlings. Most people who have facilities for growing trout in ponds or brooks will prefer to leave this work to the breeders, and look to them for their stock trout.

STOCKING A TROUT STREAM.

Several courses may be taken to do this, without the trouble of hatching the eggs on the premises. If the stream is entirely barren, of course trout must be introduced. If it is nearly barren, it will be best to do this. You may either put in a few hundred two-year old

54,000,000 were put in last year [1870] at Hadley Falls, at an expense of \$500, and 64,000,000 the present year [1871], at about the same cost. There is no doubt about the result. We can multiply this fish with the same degree of certainty that we can pigs and poultry upon the farm.

THE BLACK BASS

is one of our best fish for private enterprise to handle. The quality of the flesh is good enough to satisfy even an epicure, and it will thrive in ponds that can be made and controlled on almost any farm where there is a stream. The good qualities of the black bass (*Grystes nigricans* of Agassiz) are thus summed up by Dr. W. M. Hudson, one of the Fish Commissioners of the State of Connecticut: "He is one of the finest fish known for the table, ranking second only to the salmon and trout, and by some considered even su-

perior to them. In size he obtains an average weight of four or five pounds, and one has been taken in Massachusetts weighing seven and a half pounds. Secondly, he is exceedingly hardy, and adapted to our waters, being a native of the Northern lakes. He has been placed in several ponds in Massachusetts and Connecticut, and found to thrive. Any pond of clear water having a variety of mud and gravel bottom, and one or more deep holes, is suitable for him. Thirdly, he is a great breeder, and is one of the very few fishes that perfect their spawning beds and young fry. Fourthly, he is the only fish suitable for our waters able to defend himself against the ravenous pickerel or pike. Nearly all our ponds are infested with this pirate among fishes. He is able to conquer all his enemies. Finally, he is as game as the salmon, and in comparison with his size furnishes as much sport to the angler. He readily takes a live minnow or a fly, and when he feels the first prick of the hook frequently rises three feet out of the water in his struggles to free himself, and it requires a quick eye and steady nerve to land him safely."

The good qualities of this fish are not overstated, and there are thousands of ponds now inhabited by the coarser kinds of fish that ought to be stocked with black bass. The great difficulties in getting stock are now overcome. The late Mr. Tisdale, of East Wareham, Mass., spent large sums of money in transporting this fish from Saratoga Lake to the ponds in his vicinity, losing in the first instance his whole stock. Now it has become a regular business, and an order for black bass is as readily filled as for thoroughbred cattle or sheep. The cost is from one to three dollars a fish, according to the size and number taken, the expense of transportation being added. With an attendant they can be sent four or five days' journey by rail.

All the efforts at stocking ponds have been successful, so far as our information extends. Mr. Tisdale stocked a large number of ponds in his neighborhood, and for several years the fish have been so abundant that poachers have thriven upon his waters. Tons are taken every year from ponds of a few hundred acres, furnishing a very appreciable amount of food to the people in the vicinity. A pond

of forty acres, stocked two years ago at an expense of \$800, is now valued at \$10,000 by its proprietors, and will probably pay the interest on that sum. It is estimated by gentlemen who have investigated the matter, that one acre of water will furnish more animal food than two acres of land farmed in the best manner. One of the excellences of the black bass is, that he requires absolutely no care after he is put into his new home among the coarser kinds of fish. He caters for himself, living upon varieties that are of little value for human food. You have nothing to do but to catch him when he is full grown. A pond should be kept close for four or five years after it is stocked, and then it will bear the strain of fishing with the hook, probably as long as water runs. We are not surprised at the greatly increased interest in fish culture, and the growing popularity of the black bass.

Fish also can be raised in ponds that have no outlet, or in those that are supplied by running water only a part of the year, if they do not get so low as to destroy the fish by the excessive heat in the summer. Eels and mud pout are frequently found in these stagnant pools, but carp would be a better fish, and furnish a larger amount of food. In the abundant distribution of water in our Northern States there are few owners of large farms that can not command a valuable fish-pond. On many, the pond is already made. On others, nothing is wanting but a dam, which will be none the less valuable for fish that it furnishes water power for a mill.

To those who have facilities such as the above, we would recommend at least an experiment of fish culture on a small scale.

MYSTIC BRIDGE, CONN.

WM. CLIFT.

BOOKS.

Books reinforce us; mighty, wise,
They deign to stand as our allies;
They aid the strong, protect the weak,
Our stammered thought they plainly speak.
They give us knowledge, give us joy—
Lift us above mean life's annoy;
They give us solace, give us tears,
Give us the life of long dead years;
They give our souls immortal wings,
To mount o'er transitory things,
And view us from some lofty star,
Our life and nature as they are.

W. H. VERHAEGH.

DUALITY IN GOVERNMENT.

[A correspondent solves the woman question, or the question of franchise for woman, in the following. We go with the women, in the matter of "no taxation without representation." Our correspondent proposes one way out of the difficulty, and we shall, no doubt, hear from others on the same subject. "Let justice be done."]

ONE of the most singular curiosities in politics results from the relations of sex. From time immemorial women have been admitted to a share in civil government in nearly all communities, but seemingly as exceptional cases. Among the most barbarous tribes, as well as the most civilized nations, female sovereigns were and are known; and it appears to be only in those governments professedly democratic, as a rule, that the right of women to hold responsible office is practically denied. Curiously, too, the political positions open to the gentler sex, where they are recognized as eligible to rulership, are precisely those for which we should suppose them to be the least fitted by nature, namely, the executive ones. The British Empire, as well as European monarchies generally, has no objection whatever to invest a woman with its sovereignty; but the loyal Englishman would consider the Constitution fatally imperiled by allowing her a direct voice in the enactment of laws.

At first sight it would seem that the objection lies against women as candidates for election. We are led to imagine that the reason why a female sovereign is allowed, but a female President forbidden, has here its true explanation; and that nations do not object to women holding such offices as can be made hereditary, and attained without a struggle at the hustings. But here we are again at fault when we observe that hereditary legislators are always limited to the masculine sex, and that the appearance of a peeress as a member of the House of Lords in the English Parliament would be nearly as scandalous as her presence on the benches of the Commons. Such facts prevent much of the reproach which the advocates of political rights for women would otherwise reasonably visit upon republics, these being thus proven to be only a little more illiberal in theory than are monarchies.

This discrimination against one-half of the

human race can not be grounded in any prejudice against the principle of Duality, which is inseparable from all considerations of sexual relations, for this principle has always been a favorite with abstract philosophers, as witness the Greek dogma of a dual godhead, and has found general indorsement by the architects of governments in the general establishment of two co-ordinate legislative bodies. Sometimes, it is true, the constitution-makers have been at a loss for first principles on which to base this division of the law-making machine; but, in general, the old assumptions of caste have furnished a rule for action, and while progressive public sentiment has demanded a popular branch, responsible directly to the electors, the hereditary few have successfully contended for another, with about equal powers, in the interest of Privilege. In republican America, where no privileged class was recognized, the conservative element still triumphed by putting the State in its stead, in the Federal scheme, and thus preserving the practice of Duality, while its traditional arguments were denied. The individual States, also clinging to the principle, were forced to create Senates, which represented nothing that their co-ordinate branches did not equally represent, but were varied by making the term of office longer, and the constituency larger. Finally, the error of the principle, as applied, began to become evident to many minds, until a school has arisen which contends strenuously for a single legislative body, held directly accountable for its acts by the people. Efforts have been made to inaugurate this change in some of the States, as, for instance, in Kansas, where Gen. Lane and other prominent leaders advocated the total and summary abolition of the State Senate, as an absurd relic of Privilege, as a needless clog upon the popular will, and a source of unnecessary expense. In fact, when the Constitution of that State was formed, this feeling was so strongly developed as to confine to the House of Representatives the power of originating all statutory bills, thus reducing the Senate to the inferior rank of a revisory committee. But it has been reserved for an offshoot of imperialism to cross the Rubicon in

this innovating movement; and the Province of Ontario, in the Dominion of Canada, under the leadership of a few bold statesmen, has cut loose from the traditions of oligarchy by vesting the legislative authority in one representative body.

But has the principle of Duality—grown effete in the service of caste, and thus ignominiously abandoned, by a state subject to English domination—no useful function, born of natural causes, by the exercise of which its waning power might be restored, and a truly progressive advance made toward that perfection of government to which tend the hopes of all philanthropic thinkers? Does not the sexual character of the human race furnish a solution of the Dualistic problem, utterly free from the sophistries of privilege, and logically consistent with the severely just laws of Christianity and our national dogma of equal individual rights?

The arguments most frequently urged against political sexual equality, that the intimate association of men and women in elections and in legislative bodies would tend to degrade both, and especially undermine female virtue, may or may not be true, and certainly become powerless when confronted with the theory of a Dual legislature, where each sex shall elect a body of its own members, co-ordinate, and exercising independently the usual functions of legislative bodies. As in the election of a representative house composed entirely of women, none but women would vote, the polling-places and officers of election would naturally be of the same sex, and no public intercourse with the other would become necessary. The elections for both houses being made on the same day, the sexes would, in fact, be widely separated during the process. So, too, with the business of each house; each being officered from the sex to which its members belong, no unusual or corrupting intercourse would necessarily occur. With the right conceded that a woman, as well as a man, is eligible to any office, would cease the contention now theoretically made by the radical women of the age with regard to executive positions—these being generally admitted to belong more appropriately to the masculine sex, on the score of strength and general fitness. If occasionally a woman were elected Governor or Sheriff, we should have no fear

that the public service would suffer greater abuses than it does under the present practice. To make the laws with wisdom, observing justice to all, is the chief problem of government, and the public has always the power to compel their faithful execution. That both wisdom and justice would be more nearly attained by admitting the participation of both halves of the human race equally interested in good government, than by the arbitrary exclusion of either, would seem to be a proposition too evidently true for contradiction; and as a means of making this participation practical and effective, we suggest this interpretation of the natural principle of Duality.

THE CHARACTER OF SHYLOCK.

THE Boston correspondent of the *Springfield Republican*, on this much-abused creation of Shakspeare, says:

"Although Shakspeare elevates the character of Shylock far above the common idea entertained of Jews, he certainly never intended to make him a typical Hebrew. A brief consideration of the relations of Hebrews to Christians at the time of the occurrences related in the play may assist in explaining the meaning of the poet. At the time when Venetians controlled the commerce with the Orient, and Antonio had need of moneys for his fortune-hunting friend, the Hebrews in Europe, though subjected to unparalleled oppression, were not only merchants, bankers, and travelers, but shared with Saracens an eminence in learning and science in which Christians had but slight participation. To dispute with the church was to brave the torture of fire, and as the church claimed to be the fountain of all knowledge, and to decide every question, not only in theology, but in science also, the Christian student might find himself in the position of Galileo, of whom, at a much later period, it was determined that, as no Christian had ever been an astronomer, therefore no astronomer could be a Christian, and if not a Christian he must be an infidel, and had better be burnt. The sphericity of the earth, proved by Moors and Jews, was summarily disposed of by ecclesiastical scientists, who indignantly desired to be informed how the Scriptures could be fulfilled, and men on the other side of a globe in the day of judgment see the Lord descending through the air! Many believe that the

heathen gods died at the birth of Christ. Others hold that, like the Bourbons, they are in hopeful and dignified retirement; Bacchus and Silenus, for better concealment, hiding under cowl and gown, while Jupiter has been seen by sea captains near the north pole in destitute circumstances. It is not material where they went. It is very certain they were deposed and fled away, among them great Pan, and with him all the immortal inhabitants of air, woods, and streams. There was a new heaven and a new earth, but the imagination of man remained, and the solitude and moonlight were again peopled. Devils, witches, and goblins held revel where Pan had piped to answering echo, and Oreads and Dryads had sported in the sylvan shade. Civilization, learning, art, disappeared with the pagan world, and ignorance settled with Christianity into the night of the dark ages.

"The revival of learning in Europe was through intercourse with the Saracens and Jews, but it was a slow process, and in Shylock's time the Christian world was still in the darkness of superstition. It was the era of magic, necromancy, and astrology on the one side, and monkish assumption on the other. While the forbidden arts consulted the dead, or bargained with the devil for his powers, or conjured the wandering stars, the regular faculty howled prayers to avert the pestilence shaken from the tails of wrathful comets, and cured diseases by the exhibition of loathsome relics. Nor were these delusions of the ignorant and debased alone; the mightiest men controlling the Christian world were entirely under their influence. It is humiliating to reflect that, in the midst of this abject ignorance, there were learned Jews looking on with calm and pitying philosophy; miracles wrought by dirty monks, trials by battle, ordeals by fire and water, all the supernatural machinery of the middle ages, were to them gross and palpable imposture. Persecuted elsewhere, the Jews found safety in learning, through the fears of the more instructed Christians, who desired their skill in medicine; and although this was forbidden by especial act of the church, Jewish physicians were protected by powerful nobles, princes, and even popes. It is not necessary here to name the great men who adorned the schools of Jewish learning, what time Jessica fled with her unthrift love as far as Belmont, and Shylock raged about it under the shadow of the lion of St. Mark. The blows quietly struck at supernaturalism by learned Jews were not unknown to Shak-

speare, who, coming soon after the flood of light let in upon Europe by the discovery of the New World, could appreciate those grand souls who had cherished science in defiance of the inquisition. It argues very shallow knowledge of his subject to assume that the great master in dramatizing the old Venetian story intended to represent in Shylock the majesty of the Jewish race struggling against oppression."

AMERICAN EDUCATION.

ACCORDING to the forthcoming Report of the Commissioner of Education, there are, in the United States, 5,643,534 persons ten years old and over who are unable to write. They are distributed generally as follows:

Divisions.	Male.	Female.	Total.
Northern	571,954	781,251	1,353,205
Pacific	51,517	51,077	102,594
Southern	1,985,276	2,202,559	4,187,835
United States....	2,608,847	3,034,687	5,643,534

This synopsis of illiteracy in our own population suggests many vital thoughts with reference to the future of our nation.

Next to the parental duty of cherishing the life of the child is that of informing and disciplining its mind, so that it may become an aspirant and competitor for success, respectability, knowledge, and position when arrived at mature age.

The bitterest reproach that can be made by children against an unwise parent is that of neglecting their education and allowing them to grow up in ignorance. So the worst reproach that can be brought against any community is that of having refused to provide for the education of its citizens. An ignorant population is an element of weakness in the state, causing insecurity and lawlessness, retarding industrial and material progress, and bringing many burdens upon property.

The wisest, as well as the cheapest, course to pursue is to educate the children; and therefore it is expedient, as well as just and humane, to make the cost of tuition in the public schools a charge upon the taxable property of the community.

A TEXAN'S GREETING.—"God grant that the JOURNAL may live long, growing constantly in wealth of wisdom and soul-stirring influence. Each number increases my temporal prospects for the better, and vastly improves my hopes of the life into which none but the 'pure in heart' can enter.

T. L. W."



NEW YORK,
MARCH, 1872.

PHRENOLOGY—DESTRUCTIVE— NESS—MURDER.

A WRITER in the *Chicago Evening Post* of the 10th Jan. instructed its readers with the following brilliant essay. We introduce remarks in brackets.

"Since Mr. Barnes expired, according to previous appointment at Pittsfield, in this State, the phrenologists [What phrenologists?] have been interviewing his occiput with unusual success. The man having been hanged for murder, his organs of Destructiveness have been declared to be very large. [Which is, no doubt, quite true.] What is still more alarming, his two brothers, aged respectively ten and thirteen, are said to possess precisely similar developments [Probably; brothers, who "take after their parents," are expected to resemble each other], so that we may expect them within the next ten or fifteen years to vindicate the accuracy of Phrenology, and prove the legitimacy of their descent by imbruing their fore-ordained hands in innocent gore. [Indeed, and is this a *legitimate* inference drawn from the doctrine of Fore-ordination? PHRENOLOGY teaches that we may and should *overcome* strong tendencies to besetting sins.] A nice question here suggests itself. If these young boys grow up and kill anybody, can they be held responsible? [Not if you decide them to be imbecile, idiotic, or irresponsible.] They were not the edificators of the murderous cranial protuberances. [No, but they may increase or diminish them.] Again, if the phrenologists speak by the card, and are worthy of credence, would it not be advisable to kill those two boys now? An ounce of lead is better than a pound of hemp. A murderer in the coffin is worth two on the gallows. By killing them ere their bumps have begun to work, we shall save some

men's valuable lives; the parents of these embryo Traupmans will save the cost of their keep, and the State of Illinois will not have to convict nor the Governor to pardon them. [Were this process to be applied generally, we fear there would be very few people left in Illinois.] The Table-Talker turns down his thumb with Roman firmness, and demands the slaughter of those boys. Indeed, he is clearly of opinion that we ought to go further. A Government Commission should be appointed to manipulate the heads of all children in the United States as soon as weaned. Wherever bumps of normal origin were found which seemed to assure to their possessor the career of a Fisk, a Stokes, a Tweed, or a Train, that suckling's funeral should be appointed for the next afternoon, and nothing should be permitted to interfere with the punctual delivery of the corpse. [But why not treat the parents in the same way? "Like begets like, you know."] With the evil-doers thus eliminated in their very cradles, our country would be enabled to rise to a pitch of glory and virtue unequalled in the history of the world, and, firmly built upon the bumps of Veneration and Philoprogenitiveness as upon rocks of adamant, to stand unmoved, while kingdoms and empires around her melted away into confusion and nothingness."

[There is, however, some good sense in this, and we could wish that only those who are fit for it should become parents at all. There is vastly more pains taken to improve the breed of horses, cattle, and pigs, than human beings with immortal souls. We have only to visit asylums, hospitals, prisons, and poor-houses to meet such a raff of badly generated human rubbish as to sicken a sensitive nature. It may be very wicked,—no doubt it is,—but we have met not a few poor helpless creatures in human form whose almost only wish is to be relieved of a worthless life, and who have a thousand times regretted that they were ever born. It is among this class that suicides are found.

Our Chicago cotemporary does injustice to Phrenology when he charges it with the faults of which he complains. As well may he blame the physician for

discovering the *cause* of a disease. A phrenologist simply points out what he finds to be true. He creates nothing. He destroys nothing. He only discovers. And what is more, he tells you *how* he does it.

Seriously, before dismissing this subject, we would urge upon the attention of the *Chicago Post*, and those who think with him, a little book on pre-natal influences, or human development according to the laws of hereditary descent. It is entitled the **PARENTS' GUIDE**, and should be read by all who would aid in the improvement of the race. This work teaches how we may correct in children errors and faults derived from parents.]

THE CASE OF LAWRENCE SULLIVAN.

A VICTORY FOR PHRENOLOGY.

AS the readers of the **PHRENOLOGICAL JOURNAL** will remember, we gave an account of the circumstances connected with the murder of John O'Brien by Lawrence Sullivan, together with some of the more important facts and incidents of Sullivan's trial and conviction in our March number for 1871. The case of this unfortunate man has attracted a great deal of public attention, not only on account of the horrible character of the crime and the peculiarities of the prisoner, but also because it has formed a precedent for the introduction of phrenological testimony in criminal trials, particularly as that testimony has been fully sustained by subsequent facts, and by the report of a commission composed of three of the most accomplished members of the medical fraternity. A brief *résumé* of the case, therefore, may be both interesting and instructive to our readers.

Lawrence Sullivan was born in Odon, in Ireland, in the year 1844, and came to this country with his mother and brother in the year 1860. After his arrival in this city he and his brother worked together as laborers, and both resided with their mother at No. 19 Albany Street until about the month of May, 1868, when Lawrence got married and went to housekeeping. Shortly after his marriage he became exceedingly jealous of his wife, and in consequence of this his conduct toward her began to be very brutal and abusive, so much so

that after the birth of their child she was compelled to leave him and seek a home for herself and child with her mother at No. 1 Whitehall Street. On the evening of the 15th of June, 1870, Sullivan was returning from work, when he was met by a man who began to upbraid him for allowing his wife to live at No. 1 Whitehall Street, insinuating that she was leading an immoral life there. Sullivan's jealous passion was at once aroused, and in a fit of rage he went to the house where his wife was staying, entered her apartment, and began to abuse her. Her mother came to her assistance and belabored him soundly on the head with a cudgel. This drew a crowd around, among whom was John O'Brien, a very quiet and inoffensive young man. Sullivan, in a paroxysm of rage and excitement, pulled a large clasp-knife from his pocket, and after opening it rushed toward O'Brien saying, "I will kill you you ———," and plunged the knife three times into O'Brien's abdomen. The murderer was arrested immediately, and O'Brien was taken to Bellevue Hospital, where a few days afterward he died. At the coroner's inquest Sullivan was very violent, and during the proceedings seized a chair and threatened to knock the brains out of some of the witnesses. He was committed to the Tombs by the coroner on the 20th of June. About the 1st day of August he retained Mr. John Boyd, of the New York *Clipper* Building, as his counsel, and on the 4th of August he was arraigned in the Court of General Sessions, and pleaded not guilty to the indictment of murder in the first degree, which had been found against him.

As the prisoner had no money wherewith to pay the expenses of the defense, one or two leading lawyers, to whom his relatives had applied to take the case, refused to do so, particularly as they said because it was a hopeless affair and nothing could save him. In preparing for the defense, Mr. Boyd had a task that was anything but easy. The facts of the killing were strong against him. The testimony of six or eight eye-witnesses was incontrovertible. The plea of insanity was thought of, but the prison surgeons laughed at the idea, saying that the man was as sane as his counsel, or something to that effect. The counsel, who has given some attention to the study of Phrenology, saw that his client was a man of very strong animal passions and impulses, and that his mental development was of that very low order which borders on idiocy, and concluded that the science of Phrenology, if properly applied to this case, would save his client's life

He accordingly applied to Mr. S. R. Wells, who consented to examine the prisoner and testify in relation to his mental and physical condition at his trial.

The trial commenced on the 14th day of December, 1870, and was concluded on the 15th. On the second day of the trial Mr. Wells was placed on the stand and gave the following evidence :

Q. (By Counsel.) You have heard the testimony, Mr. Wells, in this case ?

A. I have heard the statement of the prisoner.

Q. Mr. Wells, are you an expert in regard to what causes insanity, temporary or otherwise ?

A. I think I may say I am, sir.

Q. (By the Court.) How do you call yourself an expert ? Do you examine the formation of the brain ?

A. Yes, sir, and in the delineation of character by the organization as a whole.

Q. Have you made diseases of the mind and the development of the brain a special study ?

A. I have, sir.

Q. How many years ?

A. Twenty-five years or more.

Q. Now, sir, will you state what is necessary to produce temporary insanity in cases of this kind ?

Question excluded.

Q. Have you ever been acquainted with, or devoted much attention to, cases of idiocy, Mr. Wells ?

A. Yes, sir.

Q. Having made diseases of the brain and the formation of the brain a special study, from all the evidence you have heard in this case, would you suppose that the circumstances would produce insanity, temporary or otherwise ?

A. If the Court will permit me to state, I should regard it a case of imbecility rather than insanity, except such a state of frenzy as would arise from the excitement.

Q. Would the circumstances of this case, so far as you have heard them, be sufficient to throw this prisoner into a state of frenzy ?

A. Very slight provocation would quite unbalance him. He is but an unfortunately or ill-developed person. He has a child's brain with a man's body.

Q. Would such circumstances as this totally subject him to his animal impulses ?

A. Yes, sir.

Q. (By the Court.) Did you make only one examination of this man ?

A. Yes, sir, but one, during the present week, at the Tomba.

After the summing up of Counsel, and an able charge by the Recorder, the case went to the jury, who at once rendered a verdict of "guilty of murder in the first degree," without leaving their seats.

THE SENTENCE.

Recorder Hackett, in passing sentence, said : "Sullivan, a more wanton and brutal murder has never passed under my observation, after thirty years' experience in matters of this kind. You have been most righteously convicted. The closing duty of this Court is to direct that you shall be taken hence to the City Prison, from whence you came, and on the 20th of January (Friday), between the hours of ten and two, you be hanged by the neck until you are dead."

The great excitement which he underwent during the trial, and the dread of execution, seemed to deprive him of what little reason he possessed, and he continued to rave for several days afterward, and refused to take food until the jail physicians were compelled to force it down his throat. Although he received all necessary attention from his keepers and the best medical treatment, he has still continued in a state of utter imbecility, fully verifying the statement "that slight provocation would quite unbalance him, as he is but an unfortunately or ill-developed person. He has a child's brain with a man's body."

A writ of error and stay of proceedings were afterward obtained, and the case argued in the General Term of the Supreme Court, in April, 1871. There the verdict and judgment were confirmed, from which decision counsel appealed, and the case was carried up to the Court of Appeals in Albany.

In the mean time several persons were discovered who knew Sullivan in Ireland, and who deposed that insanity was hereditary in his family, both on his father's and mother's side, and that in his boyhood he was known by the sobriquet of "Crazy Larry." The Reverend Father Quinn, pastor of St. Peter's Church in Barclay Street, also deposed to the effect that he believed that Sullivan's insane jealousy and cruel treatment of his wife were the result of mental imbecility. Upon these affidavits and other documents Mr. Boyd presented a petition to Governor Hoffman in December, 1870, praying for the appointment of a commission *de lunatico inquirendo*, to ascertain Sullivan's mental condition. The Governor granted the petition, and appointed Dr. J. S.

Mosher, Surgeon-General of the State of New York, Dr. D. Brown of Bloomingdale Asylum, and Dr. White of this city as medical experts to examine the prisoner and report upon his case. After making a thorough examination, they declared it to be their opinion that Sullivan was hopelessly insane, with no probability of his recovery. Upon receiving this report the Governor ordered the sheriff to remove him to Auburn Lunatic Asylum, and there he now is. It will be seen, therefore, that in December, 1870, Phrenology positively declared what Sullivan's mental condition was, and in December, 1871, that declaration was fully sustained and confirmed by the highest medical authority and by the Executive of the State. So terrible was the crime, and so devoid of any apparently legal grounds of defense was the prisoner, that had Phrenology not intervened in this case, nothing could have saved Lawrence Sullivan from the gallows, and he would have been executed on the 15th of January, 1871. This we state on the positive assertion of his counsel, Mr. Boyd.

Let us hope that this sad case has opened a new era in the administration of criminal jurisprudence.

BLUSHING.

WHY do we blush? What is the cause? Can it be prevented? Why do the young blush more readily than the old?

In answer to these questions science comes to our aid and informs us that this sudden reddening of the face is due to a rush of blood into the capillaries of the skin. The influence of nervous conditions is strikingly exhibited by this phenomenon, the circulation of the blood, or rather the action of the heart being responsive to those emotions and passions which have immediate relation to the brain and nervous system.

There is a marked difference among individuals in respect to blushing. One who is very sensitive to praise or blame has large Veneration, Approbativeness, and Conscientiousness—blushes on the slightest occasion; while one with those organs small will be comparatively indifferent to either—will not be moved by censure or by applause, by the powers on earth or in heaven. A vivid consciousness of one's poverty or ignorance, or other imperfection, tends to produce a feeling of humility, and this causes one to blush. Large Self-Esteem, with intellect, culture, and competence, gives assurance, makes one feel always at home where-

ever he may happen to be, and this puts one above or beyond the disposition to blush. The old saying that "a guilty conscience needs no accuser," is based on the fact that one under conviction shows it in his face; and a young rogue, when confronted with his wrong-doing, will usually blush just in proportion to his sensitiveness and his consciousness of guilt.

The fact that one can not overcome his diffidence and look friend or foe in the face, is no evidence of sin or wickedness, as some suppose. On the contrary, it is often the case that the most innocent and virtuous are so bashful that it is next to impossible for them to look even an inferior squarely and steadily in the eye. He soon falters and assumes a downcast look in keeping with his modest and sensitive nature. Self-confidence, for the diffident, may be acquired, and though one would almost sink in his shoes the first time when he appears to speak before an audience, he will, by practice, overcome his timidity, or "platform fever," as it is called, and when used to it, enjoy the slight agitation as a mental luxury. At first he will be suffused with blushes, and his mind will be somewhat bewildered; soon, however, equilibrium takes place, and "Richard is himself again."

The temperament also has much to do with our blushing. A nervous, sanguine temperament is much more susceptible than the lymphatic or bilious, and a blonde than a brunette. The African, the Asiatic, and the North American Indian may *feel* a blush, though—owing to the color of his skin—he may not *show* it.

One cause of blushing, on the part of some children, is produced by the mode of government adopted by inconsiderate parents and impatient teachers. Instead of mild measures, they resort to the most severe, namely, to that of *shaming* them. "Oh, you little dunce!" or, "You blockhead! did you not know better than that?" If the child really believes the parent or teacher, it will have a very ill opinion of itself, and sink into a feeling of total unworthiness. What else but a look of humiliation and self-contempt can be expected in the face of one so treated? The parent or the teacher may beget, in the minds of children, all the rudiments of dignity, manliness, and so much real nobility of sentiment and soul that he would be above doing a mean act, however sorely tempted.

PREVENTION: As in the effort to reclaim the inebriate, we must look to the awakened moral sentiments, and come under such influences as we know to be right, if we would overcome

any mental or physical infirmity like that of stammering or of blushing. We must be careful to do just right between one and another, and between ourselves and our Creator. Then, with a conscience void of offense, and a heart and will in perfect accord with the will of God—doing His service and asking His blessing on *all* we do—we shall suffer no more from the smiles or frowns of others, nor be crucified by that crushing feeling of unworthiness which causes weak, sensitive, and bashful persons to become over-red in the face from a natural or induced tendency to painful blushing.

AMERICAN WOMEN DETERIORATING?

IF we were to credit the assertions of many writers in popular publications, we should of course echo the impeachment, that our women live so irregularly and improperly that they are rapidly declining in physical vigor. But what are the facts as exhibited by scientific investigation?

R. R. McIlvaine, M.D., in remarks before the Ohio State Medical Society, 1871, on the Special Report of the Committee on Sanitary Science, gave the following statistics as proofs that women are not deteriorating. He said: In 1850, if I remember rightly, in every 2,178 of the entire population of the United States, there was one over 90 years of age, and in every 25,000, in round numbers, there was one over 100 years of age. Mr. President, it is not I who speak, it is history. It is the Bible of politics and progress, the census of the United States for 1850, that I credit with these facts.

But further: the State of New York, in 1860, had a white population of 3,881,500; of this number there were 1,646 persons over 90 years of age, viz., 704 men and 942 women; thus in every 2,327 there was one over 90, and in every 41,647 there was one over 100 years; in both cases women being in the majority.

In the State of Ohio, in 1860, with a white population of 2,802,808, there were 760 over 90 years of age; of this number there were 366 men and 394 women, and therefore there was, in every 3,030, one over 90 years of age, and in every 33,564, one over 100 years of age. In this case, as in that of New York, aged women are in the majority.

In Virginia, in 1860, with a white population of 1,047,299, there were 245 men and 296 women over 90 years of age (total 541), which gives one over 90 in every 1,935, and in every

15,178 there was one over 100 in her entire white population.

In 1860 the white population of the State of Vermont was 314,369. In this small population there is evidence of vitality; there were, over 90 years of age, 146 men and 180 women; and here, as in all the States named, women have the majority. In every 961 there was one over 90, and over 100, 13, being one in every 24,182 of her entire population.

[These statistics show clearly enough that if any deterioration had taken place prior to 1860, it must be placed to the debit of the men rather than of the women. Since 1860, if our observations are worth anything, our women have gained in robustness, and can lay stronger claim to the elements which contribute to longevity.]

THE refusal of Mechanics' Unions to reconsider their unreasonable restriction, whereby their own sons are denied the privilege of learning the trades of their fathers, is one of the mysteries of the age. We have before alluded to this, for we feel that the prosperity of the country, the interests of humanity, and the welfare of coming generations, all demand that the shutting out of boys from learning the trades ought to cease, so that they may be trained up to become good workmen, and be able to earn an honorable mode of living.—*Scientific American*.

[Aye, aye, sir. And when this thing—imported from foreign parts, where selfish monarchies rule—takes root in republican America, we may say "good-bye to Democracy." These "striking" usurpers will thwart our institutions unless broken up. Negro-slavery has been abolished. Labor in America is now free. Let no lawless combinations interfere with the fullest and freest development of all the faculties of mind and all the powers of bone and muscle.

Why not limit, by mob rule, the number of school-teachers, preachers, physicians, legislators, stage-drivers, chimney sweeps, and bootblacks? We say, teach every boy a trade, and let all follow whatever honest, useful pursuit they prefer. This is true Democracy. This is American republicanism.

When rich and merciless manufacturers grind down their operatives to starvation prices, they ought to be deserted. But

"strikes" have no business here; nor have mobs or riots. Every grievance may be redressed by lawful means, and every good citizen will abide by the laws.]

A STATUE OF FRANKLIN.

THE printers of New York and the members of the press lately joined in giving a decidedly metallic character to the one hundred and sixty-sixth anniversary of America's great philosopher and scientific benefactor, Benjamin Franklin. The 17th of January was made the occasion for the unvailing of a bronze statue of that eminent man in Printing-House Square, at which several of the best known citizens of our city assisted. The statue is of colossal size, representing Franklin in full diplomatic or court costume, holding in one hand a copy of one of the newspapers which he started. The position which the statue occupies is eminently appropriate, being in the open space between two leading newspaper offices, that of the *Tribune* and that of the *Times*, while in the immediate vicinity are the publishing offices of several other prominent journals, daily and weekly. It is scarcely necessary for us to do more than allude to Franklin. No American is better known to Americans. Suffice it to say, in the language of a cotemporary, that "his character was many-sided; he was equally noted as a statesman, a diplomatist, a philosopher, and a moralist, whose homely maxims have molded, to a great extent, the industry and economy of the present generation. His fame as a scholar is co-extensive with civilization; foreign cities give his name to their streets; and among the struggling nationalities of Europe, Washington and Franklin are ever combined as the type and symbol of republicanism."

THE GRAND DUKE ALEXIS.

THE visit of the Grand Duke Alexis of Russia to this country created considerable stir in all classes of society. As has been the case heretofore, when any foreign notable was expected to land at New York, a very flattering reception was accorded him. His visit was not lengthy, but the enthusiasm which attended it everywhere, evinced the very cordial good-will that prevails among us toward Russia.

The pictures fail to do him justice. He is a splendid young man. He stands over six feet

high—is symmetrical and well proportioned. His habits are good; health perfect; complexion fair; eyes blue; teeth even, clean, and white; and his manners those of a modest, well-bred, religious gentleman. He has nothing of the vulgar swagger seen in some princes, nor of the dull Dundreary look of certain others who are born to fame and fortune. He is now in his twenty-second year, and is the third son of the Czar Alexander. Alexis inherits something of his grandfather's fine proportions and nobleness. Nicholas, who died during the Crimean war, was one of the handsomest—not prettiest—men of modern times. He was great, he was grand, and Alexis promises to become his worthy successor. He is said to be very proud of a decoration given him as a reward for his gallantry in rescuing a lady from drowning under circumstances of great personal risk. We self-governing Americans have no fondness for monarchies, nor for hereditary rulers, be they kings, queens, or emperors, regarding them no better nor worse on account of the accident of their birth; but while they behave as well, they are just as good as other folks. We take off our hats all the same to a schoolmaster, a blacksmith, a policeman, or a president; we do no more in honor of a prince, a lord, a priest, or a pope. "A man is a man for all that," and we Americans are here in this world to assert and maintain the principle of equality of rights before the law and in the sight of God.

Crowned heads, to be sure, are vested with special responsibilities by reason of their very position, and it is their duty to act for the good of their people, to exert their "little brief authority" for the maintenance of the right, and for the general amelioration of the nation.

THE Prince of Wales is recovering from his late very serious illness. Sandringham, his residence, which has acquired considerable publicity in consequence of this illness, is situated in the county of Norfolk, England, about one hundred miles northeast of London. Sandringham, or Sand Deringham, formerly belonged to the wife of Lord Palmerston. The place was sold to the Prince of Wales, soon after he became of age, for the purposes chiefly of a hunting ground. A large and elegant mansion, known as the Sandringham House, has just been completed, with the elegant entrance gates to the park, which were presented to the Prince by the inhabitants of the neighborhood.

Department of Literature, Science, Education.

WRITING FOR THE PRESS.

THE number of magazines and books keeps pace with the increase of newspapers. The demand developed by the daily press requires solid nutriment, and constantly calls for a larger number of professional writers.

Multitudes of aspiring youth, who see fame and fortune in an inkstand, who are conscious of possessing fertility of ideas and fountains of inspiration in their own hearts, long to join the army of the pen, but lack the requisite skill. A few hints as to the means by which they may reach the goal of their desires may not be unacceptable to this class of our readers.

An excellent manuscript is no mean recommendation to a piece of writing. A new story by Dickens or Thackeray, if written in hieroglyphics, would be gladly accepted by any publisher, and paid for liberally. But an almost illegible story or essay, by an unknown author, unless it possesses at the outset rare felicities of style and richness of thought, is quickly consigned to the waste basket. The fact is, every editor is so crowded with matter for his columns that he can not stop to puzzle out words that should be plain as print. If he finds the capital letters are all right, the punctuation carefully attended to; if the English is faultless; if the grammar is nowhere imperfect; and if, below all this, the thought is good and the statements correct, these excellences, which are mechanical and require no effort of genius, will be quite sure to win him.

It is hardly possible for any one, without an acquaintance with our best writers, to become a popular and acceptable contributor to the press. Though the same truths need iterating and reiterating to every generation, yet if we can clothe them with the graces of expression that come from studying the writings of Addison and Goldsmith, of Shakspeare and Jeremy Taylor, we may gain the ear and the heart of those we aim to instruct and improve.

The style in which a truth is clothed is often as important as the truth itself. A king in rags commands no homage, but wrap him in purple and the populace bows the knee. Clothed in the royal robes of expression a common thought becomes impressive.

The literary aspirant must consider not only

the topics upon which he is inclined to write, but those which the public wish to hear about. When the Lost Arts are brought before us arrayed in all the graces of rhetoric, the perfection of elocution, and the splendor of oratory, we listen spell-bound. But when the voice ceases, and we go back to every-day life, what care we for the lost arts? We wish to know how to double our trade, to improve our lands, to meet our obligations, to raise our children, to rise higher than ourselves in the scale of wisdom and virtue. He who can most skillfully minister to these universal wants will be our most popular writer. In putting thoughts upon paper the young writer may with safety follow two or three rules.

First. Let each sentence have one positive meaning, and only one.

Second. Let that meaning be expressed with clearness, force, and elegance.

Third. Where the subject admits it, employ illustration, allusion, quotation, to enforce and adorn what you say. There is a world of meaning in that declaration of St. Mark: "Without a parable spake he not unto them." Generalities in writing or in speaking fall to ground, but let them be put in the form of a story, an illustration, a proverb, a maxim, a picture, and they are like those ancient spears which had a hook as well as a point; they could grapple as well as pierce. Shakspeare sees everything double, and by the subtle force of his genius inculcates lessons of high morality while seeming only to amuse and delight.

Emerson says the force of style consists in striking out! When one has written his thoughts, let him go over the manuscript and strike out every word and every expression that does not intensify or illustrate his meaning. Let him hunt for commonplaces, and in their stead put down rarer and more felicitous expressions. To do this part of the work with taste and judgment he must study Irving, or Macaulay, or Addison, or some other master artist in the use of words.

The tendency of our modern writers is to the use of Saxon words rather than those of Latin origin. The most successful journalist of the age uses language perfectly understood

by the great masses of the people. By this means, what he says flies *at* the heads of his readers, and not *over* them.

For those who, not having a classical education, wish a full acquaintance with our mother tongue, Webster's Unabridged Dictionary is indispensable. We know a man of the last generation, quite famous in his time as senator, politician, and platform speaker, who went through the dictionary, committing words and their definitions to memory, and reciting them aloud to himself as he walked the floor. Few men we ever heard speak possessed greater fluency and variety in expression than did he.

It is a good plan when one desires to treat a subject in an elegant and flowing style, with copiousness of illustration and felicity of diction, to take Edmund Burke, or Macaulay, or Thomas Carlyle, and read their eloquent utterances, to catch the glow of their inspiration, to breathe the oxygenated air of the intellectual heights on which they stand.

In a popular style, vividness of ideas is the one thing indispensable. Wendell Phillips qualifies his statements less than any man in the world, and that accounts for the fact that his expressions ring and tell and make a mark when the same truths uttered in guarded phrase would fall flat. Young writers often damage their sentences by placing feeble and qualifying clauses at the end. Every sentence should have a positive quality, and come out round and ringing. If it is necessary to qualify it, do so in a subsequent sentence.

A proper blending of short and long sentences makes a readable style. This can be done by breaking up a heavy period, when short sentences are required, or by using connectives to increase their length. By this means rhythm and melody may be attained. Reading aloud fine passages from noted authors, and studying the balance of their sentences, and the way in which long and short words are so blended as to make harmony, will educate the ear of the student and enable him to detect the faults of his own compositions.

A study of felicitous style will give every writer a vocabulary of words of which everybody knows the meaning and yet which are rare. For instance, I pick up the pages of *Ik Marvel* and find these words: "marrowy," "unkempt," "dapper," "sappy," "weazen," "sprawling," "bloody tomato," "checkered," "fretted-away," "arrant." They give flavor and piquancy to the style without detracting from its lucidness. In place of each one of these adjectives he could have used a humdrum word,

but the style would not have been that of *Ik Marvel*.

Every successful writer delights in polishing his sentences, in making them stronger, brighter, nearer perfection in balance and harmony. A perpetual dissatisfaction haunts his mind and governs his taste; he reads an essay of Joseph Addison and traces the links and subtilties with which thought is joined to thought; he considers the simple and beautiful texture of the woof in which, with rarest skill, reasoning, illustration, felicitous diction are made to blend in exquisite harmony. He holds the substance of the essay in solution in his own mind, and seeks to discover the secret law by which it crystallized in a form so beautiful.

A hasty writer may throw off page after page of what fills common newspapers and third-rate books. But no man or woman writes well and writes rapidly without a long, patient, preliminary drill in the art and practice of composition.

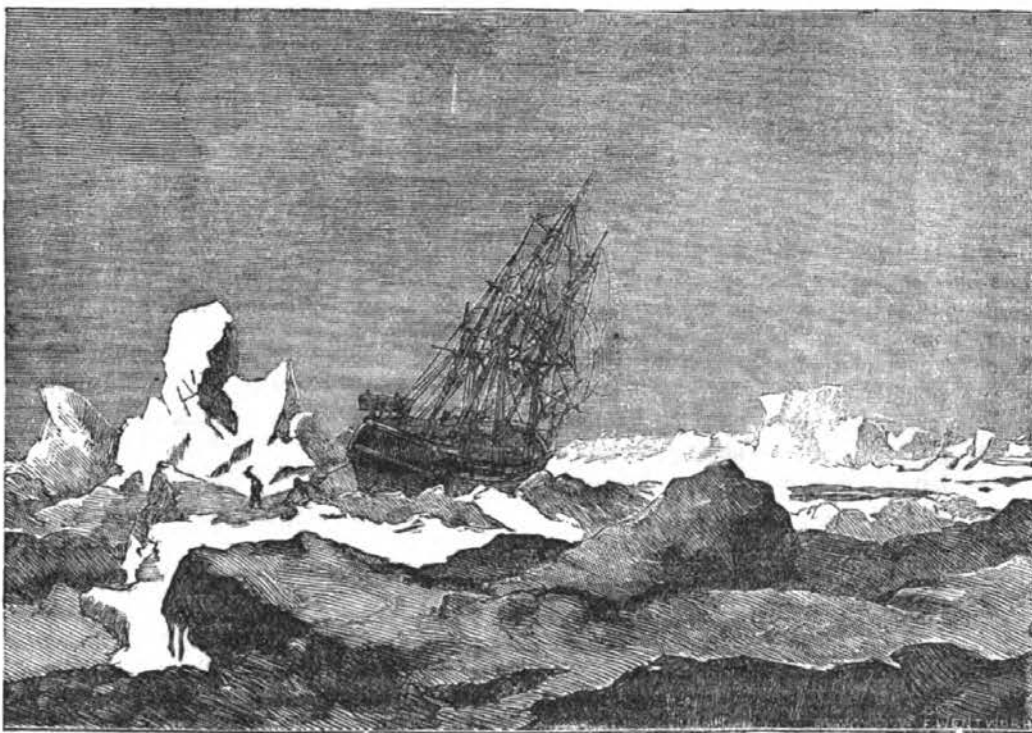
Demosthenes was five years engaged on his Oration for the Crown. He wrote and re-wrote, considered and re-considered, every word of that immortal speech. Cicero applied himself with such diligence to studies of expression that he came near losing his life. Webster was a constant student of style, and our greatest living writers have been, and are, most persistent and tireless seekers after whatever is choice, elegant, and forceful in expression. L.

THE ARCTIC REGIONS.

THE news which came to us early in December last, that a large whaling fleet had become entangled in the vast ice-fields in the north Pacific Ocean so that more than thirty had been abandoned by their crews, awakened a deep interest. Although the vast product of oil yielded by petroleum wells has, in a great measure, taken the place of whale oil for the purpose of illumination, yet the latter is very extensively used in manufactures, and every year fleets of vessels repair to the habitats of the whale, which now lie chiefly in or near the Arctic circle. The great calamity just alluded to—great because it involved not only the loss of so many valuable ships, but also many lives—brings to our notice most impressively the dangers of navigation in those high latitudes. Yet the Arctic seas furnish features of remarkable attraction, so far as the grandeur of the scenery is concerned. Vast fields of ice and tremendous icebergs, with all their strange

variety of form, and the luminous Aurora, or Northern Lights, are among the common phenomena of that region. The two illustrations which are here presented, but faintly exhibit the scenery there and incidents in the experience of Arctic navigation. The difficulty of navigating the Arctic waters is by no means exaggerated in the records of such navigators as Drs. Kane and Hall. At a degree of latitude which varies with the season of the year, the progress of ships northward is barred by a barrier of frozen water. During the summer months, when occasionally the thermometer will register a heat equal to the mean tempera-

DeHaven, of the American navy, when in command of the United States expedition in search of Sir John Franklin, was frozen up for nine months, and also the British ship *Resolute*, which was abandoned by Capt. Kellet, remained in the cold embrace of the ice "nip" for several years, and in the end was borne south, until the warmth released her and she was recaptured and sent home. The immense size of some icebergs can be realized from what we are told by Dr. Hayes, who measured one that had stranded. It towered up to the height of three hundred and fifteen feet, and was a little more than three-quarters



"CAUGHT IN THE ICE."

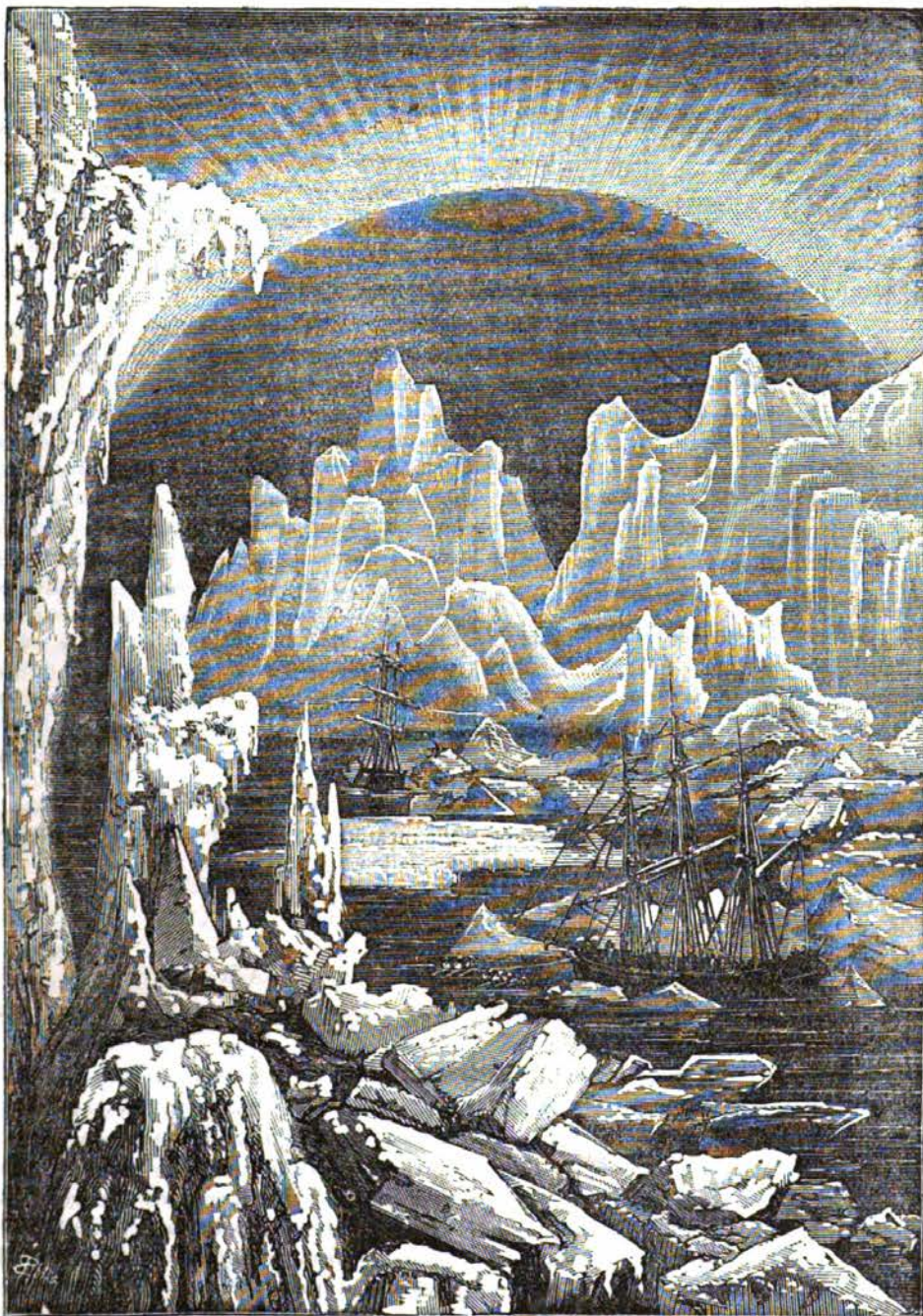
ture of the tropics, the zone of the north is loosened, the outer edge of the belt cracks and splits into vast mountains of ice, which at length get under way and move southward, and in the summer months are frequently met with in the north Atlantic even by vessels plying between our ports and Europe. While our first engraving shows, what has several times occurred, to wit, a vessel being blocked in, or "nipped," by the closing up of the ice, the second shows how adventurous explorers for the North Pole, or the open Polar Sea, are obliged to make their way through the drifting ice-fields. It will be remembered that Lieut.

of a mile long. Owing to the very slight difference between the specific gravity of ice and that of water, this iceberg extended nearly twenty-five hundred feet beneath the sea level. The weight of this vast hulk was estimated at two thousand million tons. It is not at all wonderful that vessels are crushed like eggshells when they are so unfortunate as to come in contact with one of these monsters.

For some years past American and European explorers have given much attention to investigations having in view the solution of the open Polar Sea problem. Both Dr. Kane and Dr. Hayes announced as one of the important

features of their respective expeditions that they had reached open water, and had found such evidences as led them to believe that

of the German expedition (which was made amid Arctic ice last year, under the command of Lieuts. Payer and Weyprecht, and which



SCENERY IN THE ARCTIC REGIONS.

they were on the confines of a vast sea whose waters were not confined by an icy surface. Dr. Peterman, the eminent German geographer, has very lately announced as one of the results

had sought the hitherto almost unvisited seas lying between Spitzbergen and Nova Zembla), that open water had been found in latitude 78° north, extending upward of five hundred miles

from east to west, and abounding in whales. This sea, the explorers believed, under favoring conditions, would afford an open way to the pole. This, as additional evidence, is only cumulative, however, and by no means positive. It has long since been known that open water lies beyond the ice-bound seas northward of Siberia. It has also been shown that there is open water to the north of portions of the American continent. It is also very well known that near the very region where Payer and Weyprecht found open water, Henry Hudson, sailing in one of the clumsy tubs called ships in the days of Queen Elizabeth, reached a far higher latitude than the German navigators. But he did not, however, pursue the same course, since the Germans sailed between Spitzbergen and Nova Zembla, while he sailed around the northwestern shores of the former island. In 1827 Capt. Parry reached a yet more northerly point, and although his voyage was not strictly a sea journey, but made by means of boats and sledges over the ice, his progress northward was finally stopped in such a manner as to indicate very clearly that the seas on which the ice-fields lay were both far-reaching on all sides and deep. The difficulties and dangers under which the Parry party labored were very great. Several were rendered half blind by the glare of the snow-fields, yet they resolutely plodded onward, sustained by the hope of succeeding in that attempt which so many before them had made, but in vain. In fact, so far northward was their progress that it seems altogether probable that

they not only reached the pole, but even passed beyond it. One great difficulty in the way of the Arctic explorer was ascertained to be due to the fact that the strong winds blowing almost constantly toward the south, drove the whole ice-fields southward, so that as rapidly as advancement was made upon the ice, he might be carried in the opposite direction by the movements of the vast floating raft. When Parry led his men toward the North Pole there must have been open water all along the northern edge of the great ice-field, and extending to a distance of at least two hundred miles toward the pole. The importance of the results achieved by the German navigators, although it affords no new evidence respecting the open Polar Sea, consists in the fact that the open waters surrounding North Spitzbergen may be reached along a new course. It requires only a glance at a good map of the Arctic seas to see that in all probability the open water discovered by Lieuts. Payer and Weyprecht communicates freely, not only with the seas on which Hudson sailed, but also with the open water reached by Drs. Kane and Hayes through Kennedy's Channel. So many valuable lives have been lost in Arctic explorations that we fervently hope that now some new and positive clue has been obtained by which this troublesome question of the open Polar Sea shall be speedily set at rest and forever. For all practical purposes, such a discovery will be of no use to commerce. It will be nothing more, at the most, than an addition to our scientific information.

THE TRUE MEANING OF ADAM.

THE use of the word "Adam," in the early chapters of Genesis, has given it an importance and an interest that it would not otherwise have possessed; and perhaps no question would ever have arisen as to its meaning or application had it not been for the recent discoveries of geologists; or the researches of ethnologists in regard to the time which Scriptural chronology affords for the various changes, divergences, and varieties of the human race.

The *six days* of creation presented the first great difficulty; as all the evidences of Geology so manifestly proved that the stupendous phenomena of the creation of the universe never could have been accomplished in so

short a time, therefore the student in theology sought for new modes of explanation, by which to reconcile this language with the facts of science; and this has been attempted in various ways, whether successfully or not, may yet be undetermined. But now a new question has arisen in regard to Adam—as to whether he was the first created man, or whether there were pre-Adamic races? Recent discoveries of human remains in formations of the earth antedating the oldest Scriptural chronologies by many thousands of years, as well as the argument founded on the very early and widespread diffusion of the different colored races, found in every known region of the earth, have given rise to doubts

as to whether, six thousand years ago, Adam could have been the first created man. The evidence in opposition to this has now become so strong as to make it necessary to revise and correct the impressions which have hitherto been so indelibly impressed upon the mind in regard to the extent and application of its meaning, and to endeavor to show that Adam was not the first man, but the first *white man*; that he stands for the type of the Caucasian race, allowing that the Malay, Mongolian, Indian, and Negro might have been in existence for thousands, or even tens of thousands, of years previously. This is the drift of an article in the October number of *Scribner's Monthly*, under the heading of "Was Adam the First Man?" And it is this question which we now propose to consider.

In taking this position, the writer has certainly said all that could be said in support of it; and if there were no adverse considerations in the way, it might with much apparent reason be concluded, that the point was not only well taken, but also well sustained. But there is really so much conflicting testimony, and so many erroneous assumptions in the way, as to entirely invalidate the whole superstructure of the argument, and show that the right vein has not been struck. In the first place, to maintain the theory that by Adam is meant the progenitor of the *white race* alone, and make the Biblical record agree with scientific facts, it is necessary to assume that the flood was local, and not universal; that is, only spread over that region of the earth described by the late Dr. Pye Smith as "lying between the Caucasian ridge, the Caspian Sea, and Tартary on the north, the Persian and Indian seas on the south, and the high mountain ridges which run at considerable distances on the eastern and western flank; and that this wall of waters, which covered the tops of these mountains, stood some three miles high during the duration of that flood! and that Noah had to build an ark, and collect into it pairs, and septuples, of all the animals upon the earth—or it may be only that part of the earth—to save them from being drowned; when yet he and they, by retiring to the other side of the mountains, would not have been disturbed by the flood at all! But this theory concerning Adam makes it necessary that the flood should only be local; for had it been

universal, as is the obvious meaning of the literal sense of the text, it would have afforded less than two thousand years to the time of the Christian era, for all the divergency and multiplication of races which existed at that time. Whatever might be meant by *Adam*, if the whole human race had perished in the flood, except Noah and his three sons, and their wives, the question would resolve itself, not into Adam, but into Noah; i. e., was *he* the progenitor of all the families of the earth?

This, the writer in the above article would never maintain; so that whatever weight there might be in any of his other arguments, they would all utterly fail if the flood were *universal*. But, waiving this consideration, there seems to be no possible ground for so interpreting the recorded history of man in Genesis as to allow of any pre-existent race; as from the time the earth was "without form, and void," a connected history is given of each and every successive creation, whether of vegetable or animal, up to Adam and Eve, previous to which it would seem utterly impossible to suppose that men of other colors could have existed; the more especially, too, as it is distinctly declared, that previous to this time "there was not a man to till the ground;" and, indeed, such has ever been the uniform understanding of this narrative according to its strictly literal construction, both by Jew and Christian; and there does not appear to be the slightest warrant for supposing there were, or could at that time have been, any previously existing races upon the earth; and nothing but the pressure produced by the investigations of Ethnology and Geology would ever have suggested so improbable (if not impossible) an idea. It is unquestionably true, that the discoveries in science are constantly demanding new explanations and interpretations of the Scriptural records; but unless they are consistent with other statements in the same volume, they can have no weight. Among other efforts to reconcile Genesis with Geology, it is stated by the above writer, that some theologians infer "that the Mosaic chronology is incorrect. They put back the flood at least ten thousand years, and the creation of Adam ten thousand years before the flood." But there is nothing in the text that will warrant any such liberty;

the Septuagint version, which is the longest that can be claimed, would give but 897 years more than the version of Archbishop Usher; and yet Geology, it is admitted without question, places man's existence on the earth many thousands of years before the time which the longest of our Biblical chronologies afford. Yet it is said, "We must hold fast to all the declarations of the Bible. They are the utterances of inspired truth." And any divergence which may exist between the two records, the Book of Nature and the Book of Revelation, is attempted to be reconciled by saying, that "If Geology, or any other science, reveals *facts* that conflict with the common interpretation of the Mosaic record, it is probable the interpretation is at fault; it can not be the record itself." We readily accept this as sound doctrine, and the only thing to be regretted is, that the true meaning is not disclosed, or the true interpretation given: and yet sometimes it seems as if that meaning was actually on the point of being declared, and the veil withdrawn from its apparent obscurity. But instead of this, we realize nothing but a darker shade, or a less satisfactory explanation! Thus, when we are introduced to the use of the two Hebrew words for Man, *Adam* and *Ish*, it appears as if the true meaning was at once forthcoming. But instead of its being shown that *Adam* is a generic term, a word conveying the idea of the *human race*, we are told that it "is *not* used in the Hebrew text as the genuine term for mankind in general;" but "in the particular sense," or as an individual, and that when that wider and comprehensive meaning is intended, "a different word (*ish*) is employed." Now this seems to be directly the opposite of the real facts of the case; for it is the word *Adam* that is generic; and *Ish* that is individual and masculine. Not only does the context constantly show this, but the philological composition of the word itself. *Ad* (as the root of *Adam*) denotes an emanating power, as a creative act, and *Am*, origin, conception, going forth into creation—thus abstractly, that process of generation by which the final act of creation was accomplished; and in its combined and compound form, as *Adm*, or *Adam*, it means, as the author of the "Genius and Spirit of the Hebrew Bible" says, "mankind in general."

Of this he says "there can be no doubt," and in proof cites from Genesis v. 7, where it is written, "And the Lord said, I will destroy man [*Adam*], whom I have created, from the face of the earth," thus showing, as he further says, that "Adam is positively put for mankind." The word "*Ish*," for man, is never used until the woman was taken or separated from him, as at chap. ii. 23; and *this* word means Man, *masculine*, or *individual*; whereas *Adam* means Man collectively,—the human race, including male and female. And nothing can be more evident than this, if we but look at the way in which it is used. The first time this word *Adam* occurs is in Gen. i. 26, where it is written, "And God said, Let us make man [*Adam*] in our image, after our likeness; and let *them* have dominion over the fish of the sea," etc. "Male and female created he *them*." And God blessed *them*, and God said unto *them*, Be fruitful and multiply, and replenish the earth," etc. And again in chapter v. 2, "Male and female created he them; and blessed *them*; and called *their* name *Adam*, in the day when *they* were created." The same word is used in Ps. cxvi. 11, where it is written, "I said in my haste, *all men* are liars." What can be more conclusive than this fact, that *Adam* does not mean any one individual man, but mankind collectively, whatever may be their number, race, or color?

And not only the Septuagint, but all Greek versions, faithful to the meaning of the original, when they translate this word *Adam*, do so by its answering synonym *Anthropos*, which in like manner is rendered into English by the noun of multitude "man," or mankind. Thus, Paul says, "The first man" (*anthropos*), i. e., the first order, or class of men, "was of the earth, earthy;" i. e., natural, sensuous; "the second man [*anthropos*] is from heaven,"—heavenly. The same word (*anthropos*) is used where he says, "If in this life only we have hope in Christ, we are of *all men* most miserable." *Anthropos* answers to the Hebrew *Adam*; while *Aner* answers to the Hebrew *Ish*, a man, or man masculine; thus he says, "A man [*aner*] indeed ought not to cover his head;" and, "If a man [*aner*] have long hair, it is a shame unto him." And of himself, personally, he says, "When I became a man," (*aner*) etc. And this distinction is equally

and everywhere preserved in the Latin also, where the Hebrew *Adam* and the Greek *Anthropos* are as constantly rendered by the word *Homo*—from which we have *Human*, and *Humanity*, or man in the collective or universal sense. Nor is this in the slightest degree weakened by the fact that after it had been written, "God said, Let us make man [*adam*] in our image;" etc., the next verse reads, "So God created *ha-adam* in his own image," etc. There is a peculiar distinction of terms made use of here; when God "made" man, the word *Adam* is used; but when he "created" him, the term is *ha-adam*, because it implies something different. But the prefix *ha* does not mean the same as the English article "the;" nor is it intended to limit it to the meaning of an individual man; for this is impossible consistently with the context; but its meaning is to be found in the signification of the letters, especially the letter H; this being a breathing sign, denotes breath, life, inspiration, soul, or spirit, and is immediately connected with the declaration that, "God blessed them, and said unto them, Be fruitful, and multiply, and replenish the earth;" which was effected by the Lord's breathing his life into them, to enable them to do it; as when the Lord "breathed into his nostrils the breath of life, and man became a living soul." For the same reason these letters were added to the name of *Abram*, when new life-power was given to him to increase "and be exceeding fruitful," and be "a father of many nations;" for then it was said to him that his name should no longer be called *Abram*, but *Abra-ha-m*. And when the Lord blessed Sarai, and fructified her by the inflowing of his quickening life, it is also said that her name should no longer be called *Sarai*, but *Sara-H*; for then she should bear a son; and she should be a mother of nations. Thus it denotes an added force, or life-power, by the reception of new and vivifying influences from God. There is, therefore, no reason, not a shadow of reason or fact for assuming that *Adam* means the first individual man upon the earth, whether as the progenitor of all races and colors, or whether as that of the white race alone. But its true and intended meaning is, that of the collective man. Still, this is but its outside meaning; for, left thus, it would seem to be a cause of yet greater difficulties;

as the question would naturally arise, if *Adam* means mankind in the aggregate, how could a rib be taken from his side, and built up into a woman? or how could he have had individual or personal children, such as are supposed to be meant by Cain, Abel, etc.?

All this, however—not to occupy further space—is explained and illustrated in full, in a work entitled "The Two Great Books of Nature and Revelation," published by the same house, and in the same year, as another work from which the writer above mentioned quotes, viz., "Man, in Genesis and Geology." In that volume all these points are dwelt upon in full, in relation to the origin of man; and much more comprehensively than here, and the entire unity, harmony, and relationship of those two great Books of God—the Book of Nature and the Book of Revelation, are attempted to be shown beyond a peradventure.

It enters fully into the distinctive races of mankind, and shows whether their origin was singular or plural; and is a refutation of the Darwinian theory. It also shows that in believing the Bible, we are "not necessarily called upon to deny the facts of science, but rather to show that they are alike, and equally the work of one and the same Almighty hand.

GEORGE FIELD.

ILLINOIS INDUSTRIAL—MANUAL LABOR—UNIVERSITY.

[We have had several inquiries from different points with reference to a manual labor college. These we are now enabled to answer through the following communication received from Mr. Alfred White, of Champaign, Illinois.]

THIS institution opened in March, 1868, and is located at Urbana, Champaign County. The college farm proper consists of 628 acres, of which 410 constitute the stock farm, 70 the experimental farm, 130 the horticultural grounds, and 18 acres the ornamental and military parade grounds. There is an apple orchard, having over 8,000 trees of nearly 1,400 varieties. Twenty acres are devoted to the growth of forest trees.

The old University building, donated by Champaign County, is 125 feet long, four stories high, with a four-story wing 40 feet by 80. A new building now in process of erection is 214 feet in length, with wings extending back 124 feet, and when completed will be three stories

high, besides basement and Mansard roof. The mechanical building, in which is a drill hall, is 128 by 80 feet, two stories high, with towers three stories in height. The lower story contains boiler and forge rooms, machine shop, shops for carpentry and cabinet work, paint and printing rooms. In the second story is the drill hall, 128 by 60 feet, large enough for the evolutions of a company of infantry. The green-house is 70 by 24 feet.

Connected with the institution are a library, chemical laboratory, and a cabinet of natural history. The library contains about 6,000 volumes of carefully selected works, together with some sixty different scientific and art publications. The reading room is open every day and evening to the faculty and students.

The University is under the regency of Dr. J. M. Gregory, formerly Superintendent of Public Instruction in Michigan, a man of acknowledged talent and culture, full of life and energy, and determined to make his work a success. Connected with him is an able corps of professors, most of whom stand high in their special departments.

The following are the courses of study, viz.: Military, Mechanical, Commercial, Chemical, Agricultural, Horticultural, Literary, and Natural History. From these, students are permitted to select those they would receive in-

struction in. It is, however, expected that they shall continue a course when once commenced, unless good reason can be assigned for relinquishing it.

The number of students now in attendance is 320, of which 40 are young ladies. Probably three-fourths of the gentlemen are in industrial courses. All are encouraged to work on the farm or in the shops, and many thus pay their way. The labor system has thus far proven a success, with only one drawback, the want of sufficient work for all who desire it. The government of the University is democratic, the students enacting and executing their own laws.

Tuition is free; a matriculation fee of ten dollars, and incidental fees of two dollars and a half per term being all that is required of each student. There is not, perhaps, in the country, an institution where a young person can have similar advantages at so small expense. Like all similar institutions it has had its trials, but it has passed bravely through all, hushing the clamor of foes and changing the apathy of the indifferent to enthusiastic admiration.

Such is a plain account of our young University, the principles of whose organization should command esteem and favor. We are by no means among the best endowed, but we hope to become one among the first in the land.

JAMES FISK, JR.

THIS name is not unknown to the majority of our readers. The circumstances of his sudden death were of a nature to awaken the interest of those whose disposition or employment led them to take slight note of matters outside of the little belt of horizon which circumscribed their personal relations. Struck down in the full tide of his physical manhood and at the flood of his notorious business career by the hand of the assassin, James Fisk, Jr., has made his most powerful impression on public sentiment.

Of a bold and swaggering nature, profoundly devoted to selfish gratification, ambitious for notoriety, whatever that notoriety might be, and apparently devoid of conscientious sensibility, he was admirably constituted for the part he played in connection with a great railroad.

He was the man to accept the responsibility of carrying into effect the adroit plans of duplicitious officials; and while they might remain in the background, he found enjoyment in the conspicuity which operations startling in extent and doubtful in moral tone gave him.

Possessing a strong physical constitution, an exuberance of vitality, his powerful sensuous nature was stimulated highly; and had his training in childhood and youth been adapted to the proper exercise and development of his faculties, it would have been far less likely to have sought out methods and spheres of action so much at variance with honesty and virtue. Unhappily, his early education, mentally and morally, was not only greatly deficient, but his early and after-associations were not calculated to impress him with high and noble principles

of thought and action. The great, robust youth, willful and vain, yet shrewd and persevering, grew into the dashing man of action.

The organization of his brain at the time of his decease showed a predominant development of the basilar region; it was broad be-

while in reflective intellect, and those organs which contribute to soften the asperities of character, to impart delicacy, a high-toned refinement, which, in fine, spiritualize and ennoble human life, it was not well marked. Benevolence, however, was prominent; but even



tween the ears—the domain of propensity; it was large in the perceptive range of intellectual organs; relatively well developed in the mechanical and imaginative organs; strongly marked in the organs which contribute to firmness, independence, and aspiration;

that was in great part subordinated to the harsher and selfish characteristics. This trait would nevertheless exhibit itself in his gentle moods in a lavish munificence which could not but suggest the source from which that false generosity was derived.

Mr. Fisk was a man of good height, not far from six feet, and of considerable bulk of body. He weighed over two hundred pounds, yet was active, and possessed more than average muscular power. His temperament being of the vital order, ministered to that superb physical condition for which he was remarkable. His complexion was very light, of the highest blonde order, and indicative of the lively emotive man he was. Although in a high degree given to the gratification of animal tendencies, he had nevertheless so much regard for personal appearance, that he was discreet enough to avoid exhausting or debilitating himself by extreme dissipation. Few men can be found with so much impulse and combined with so much self-command as Mr. Fisk possessed.

Had his tremendous energy been judiciously regulated, assuming that the constitution of his brain in early life was normal, he, doubtless, would have proved of great and lasting value in the sphere which he occupied. The brain, which was examined by some of our leading surgeons, was found to weigh fifty-eight ounces, a size by no means small, as will be seen when we compare this absolute weight with that of the brains of men well known to fame. Baron Cuvier, the eminent naturalist, had a brain which ranks highest on the record, it having a weight of a little over sixty-four ounces. Dr. Abercrombie's (the English metaphysician) weighed sixty-three ounces. Dupuytren, eminent as a French surgeon and anatomist, and who was present when Cuvier's brain was taken from its bony case and examined, had sixty-two and a half ounces of brain. The distinguished statesman Daniel Webster was found to have carried a great weight of brain during his mature life, fully sixty-three ounces being credited to him. Ruloff, the Binghamton *satan* and murderer, possessed an unusual wealth of brain material, as it turned the scale of the surgeon at fifty-nine ounces. That these figures are extraordinary is evident when we consider that the average weight of the highest order of brain as repre-

sented by the most enlightened of European races is about forty-eight ounces.

Mr. Fisk may have inherited certain elements of organization which pre-disposed him to insanity. This is by no means unreasonable, since his father is now an inmate of a lunatic asylum; and in his latter career there has been so much of the unexpected, the extraordinary, the sensational, and the incongruous, that the steady, practical, and plodding men in the community have not only wondered at his conduct itself, but have instinctively asked the question, "Can this man be altogether in his right mind?" Certainly a course of action which is entirely out of and beyond what men generally deem normal and sound, a line of life which apparently ignores the moral principles which lie at the foundation of social integrity, can not but indicate either an unhappy, unbalanced organization, or a much warped and perverted mental economy! "By their fruits ye shall know them."

For his murderer, Edward S. Stokes, justice will scarcely permit a word in extenuation. The homicide, according to all the circumstances which surround it, was cold-blooded and pre-determined. Pity may suggest that the blood-stained wretch was the victim of infatuation; that an irregular business career and illicit social relations had corrupted his manhood, and so he became the willing tool of jealousy and hate. While we contemplate this revolting affair, the admonitions of the ancient sage in the sixth and seventh chapters of Proverbs recur to mind. Let us now turn more especially to a brief consideration of the life of our subject.

JAMES FISK, JR., was born in Bennington, Vermont, April 1, 1834, and therefore had scarcely entered upon the full tide of manhood when the ball of the assassin put an end to his singularly notorious life. When about ten years old his parents removed to Brattleboro', where was passed the remainder of his youth and early manhood. His opportunities for mental improvement at school were very few, and resulted in scarcely more than a moderate acquaintance with the alphabet and the

copy-book. His father was a peddler who drove his wagon stored with calicoes, tin-ware, laces, and other trinkets through the rural districts of New England. Appreciating his son's aptitude for business, which was evinced by his shrewdness in driving petty bargains with the boys of his acquaintance, he took him on his peddling expeditions. Young James soon manifested his peculiar genius, and proved a very valuable associate. His bright, quick wit made him a general favorite, and the business improved so much that he was intrusted with a separate wagon; and finally the son boldly offered to buy out his father's interest in the peripatetic business. His offer was accepted; and he then proceeded to exhibit no little show in the character of his equipage. He drove four horses instead of two; purchased a new and splendid team; and his business rapidly increasing, he fitted out other stylish wagons, which he placed in the charge of trusted assistants. He procured his supplies chiefly from a firm in Boston, Messrs. Jordan, Marsh & Co.; and so large were his transactions with that firm, that thinking he was the young man for them, they offered him a high salary on condition of his entering their house as a salesman. He accepted the offer. However, the expectations of his employers were not realized at first, but subsequently Fisk found a congenial sphere of action, securing contracts for his firm for supplying the army with cotton and woolen goods, and the result of these operations was immense profits. He was then taken in as a member of the firm, and subsequently induced his partners to purchase cotton and woolen mills and manufacture the goods they were called upon to furnish in such large quantities. He next engaged in purchasing cotton in the rebel States, and by skillfully running it through to the North, he sold it at such prices as realized for him from six hundred to one thousand per cent. profit. It is said that in this business his chief assistant was a woman. Having made enough money, he left the old firm and started in the dry goods business for himself. He came out in showy style, of course; but unfortunately the prices of dry goods fell soon afterward, and sundry outside speculations in which he had engaged proving unsuccessful, he found it necessary to close up. Next we find him in New York, where with the remnants of his business efforts in Boston he fitted up an office in the very center of stock speculations and commenced business. But all his boldness and recklessness proved unavailing, and he was so unsuccessful, that a few

months later, entirely bankrupt, he took the cars to return to Boston. On the way there he fell in with a young inventor who had been disappointed in his efforts to bring out a little improvement of much practical utility. A bright idea struck Fisk, and on reaching Boston he induced a friend to buy the young man's patent for a trifling sum, having first secured an important interest in it for himself. This patent he pushed with energy, and found it to yield large returns; and with money enough in his hands to enable him to meet the contingencies of Wall Street, he returned to New York again. Soon afterward he became closely associated with the steamboat king Daniel Drew, in negotiations for the sale of the Stonington line of steamships. The object of this movement was to establish a line to Boston in opposition to the Fall River line, and its result was the formation of the company known as the Bristol Line. Mr. Drew first set him up as a broker in partnership with one Belden, and employed the new firm in carrying on his war with Vanderbilt for the possession of the Erie Railway. The company having charge of the Bristol line built the immense steamboats Bristol and Providence, whose palatial accommodations are so well known to the traveling public. Mr. Fisk, who had succeeded in making himself one of the directors, became dissatisfied with the management, and the enterprise proving unsuccessful, the boats, which had cost over two millions, were sold, James Fisk, Jr., becoming the ostensible purchaser, for one million of dollars. He assumed the functions of manager of the line. The company prospered under his management, and he came and took up his residence in New York. It was in 1865 that the stock-brokerage firm of Fisk, Belden & Co. was formed; and when in 1866 Drew executed his great *coup de main* in bearing the market, Fisk profited immensely, both in pocket and experience. In October, 1867, he was elected a director of the Erie Railway Company, Mr. Drew being practically in control of the road. Vanderbilt, the giant of the Harlem, Hudson River, and New York Central roads, sought to obtain sway over all the roads connecting New York with the great lakes. Other leading railroad men, aiming at monopolies more or less of a similar complexion, endeavored to secure paramount influence in Erie affairs. Among these was Mr. J. Gould, whose name has ever appeared as the complement to that of Fisk. The warfare carried on between the respective champions has become notorious. Suits and litigations almost without

number were instituted, in all of which the name of James Fisk, Jr., was prominent. Shrewdness, ingenuity, and unscrupulousness generally turned the scale in favor of the dual management of the Erie Railway. But as if not satisfied with the reputation gained from his railroad operations, we find him taking the theatrical world by surprise by purchasing Pike's Opera House, at the corner of Eighth Avenue and Twenty-third Street, and fitting it up in magnificent style, not only for the purpose of spectacular representation, in which his esthetic sense chiefly delighted, but for the purposes of the great railway whose interests he had made in so singular a manner his own. He had in operation also at one time the Fifth Avenue Theater and the Academy of Music, and spent money without limit in introducing plays or burlesque opera.

In 1869 he became President of the Narragansett Steamship Company, which he refitted at monstrous expense. Duly appreciating the comfort of pleasure-seekers, he put one of the finest steamboats upon the Long Branch route, and also established a new ferry between New York and Jersey City, connecting the Erie depot at the foot of Twenty-third Street. He apparently delighted in sensations, as nearly all his business operations were more or less of that bold and startling character which attracts the public attention. His private life was of a nature which could not be investigated without stamping him with lubricity. His sudden taking off was but the sudden and terrible result of improper social relations.

MATERIALITY AND IMMORTALITY.

IN Rev. William Pittenger's paper on "Protoplasm, or the Mystery of Physical Life," in the JOURNAL for February, on page 91, he draws a very doleful picture of mental annihilation at the death of man's body, which fact is deduced from Prof. Huxley's views of the dependence of all life upon matter, both in the origin and continuance of bodily organization. The position of the writer, I think, is one which takes a very limited and unwarrantable view of Huxley's conclusions. Certainly there can be no organic life without matter, and there can be no manifestation of mind without the intervention of grosser matter than itself; as even after the organism, with its associated mind, is complete, unless matter of an appropriate quality and quantity continue to be supplied, the bodily organs must soon lose their

power to inform the mind of outward things, and also to respond, in muscular action, to its behests; and so also the mind, in its manifestations to others, becomes weakened and incoherent. Does this prove, that because the body dies, the mind dies with it, any more than a disabled machine manifests the lack of motive power—steam—or the simultaneous death of the directing engineer?

Prof. Huxley, and many other noted scientists, as I understand their views, rightly claim that matter is indestructible, only changing in its combinations; and that forces, which control the action of matter, are also indestructible; the latter view being, equally, a necessary part of their deductions of the existence of matter under the ever-present rule of governing laws. There are, necessarily, many forces operating upon matter; most of which are more or less convertible, while some are primal and therefore not convertible. Mind-force must, certainly, be one of these, as its individual manifestations, through thought (reason) and will, alone operating through its exclusive bodily organization, fully manifests its own consciousness of being, and to the perception of another being, in the acts and thoughts it generates. Other forces in nature may destroy our present mental and organic association, by producing the death of the body, which no more annihilates the mental force than it does the gross materials of the body, but only dismembers their present connection, and gives freedom to both to enter into new associations in combination, as an eternal round of all existences and materials.

If Prof. Huxley and other scientists freely admitted, and were capable of proving, the mind's immortality—which as a positive and the most important force in creation is, I believe, thus scientifically proved to be indestructible—the same subjectiveness to change (under the action of other forces), from its present bodily association, would be equally operative, leaving the mind as an indestructible force, free for other combinations, being capable of manifesting its force by and through material agencies—in organic combination, as the only possible mental connection with God's material creation—elsewhere as here.

Thus, I conclude, that there is no cause for denouncing the inevitable and reasonably concluded protoplasmic origin and only source of the sustentation of all organisms, with their associated minds, as it in no way interferes with the immortality of any force, especially mind-force.

CHAS. E. TOWNSEND.

WISDOM.

THE intellect is perfected, not by knowledge, but by activity.—*Aristotle*.

Do not choose your friend by his looks. Handsome shoes often pinch your feet.

BULWER says poverty is only an idea, in nine cases out of ten, and that there is really more happiness among the working-men in the world than among those who are called rich.

EVERY beginner in life should try early to ascertain the strong faculty of his mind or body, fitting him for some special pursuit, and direct the utmost energies to bring it to perfection.

THOUGH judgment must collect the materials of the goodly structure of friendship, it is affection that gives the cement; and regulated passion as well as reason should concur in forming a firm and lasting coalition.

THERE is no funeral so sad to follow as the funeral of our own youth, which we have been pampering with fond desires, ambitious hopes, and all the bright seductive berries which hang in poisonous clusters over the path of life.

Do not, then said I, my best friends, train boys to learn by force and harshness; but direct them to it by what amuses their minds, so that you may be the better able to discover with accuracy the peculiar bent of the genius of each.—*Plato*.

DR. ARNOLD, of the Rugby School, England, made this reply to one who asked him why he continued to study his lessons over and over previous to going before his class to teach: "Because I prefer my students should be supplied from a running stream rather than a stagnant pool."

TRUE philosophy consists in doing all the good that we can, in learning all the good we can, in teaching to others all the good we can, in bearing, to the best of our ability, the various ills of life, and in enjoying with gratitude every honest pleasure that, in the mercy of Providence, comes in our way.

MIRTH.

[Under this heading we propose to publish

"A little nonsense now and then; which

"Is relished by the wisest men."]

"WHAT are you doing?" said a father to his son, who was tinkering an old watch, "Improving my time, sir."

A FASHIONABLE lady lately dropped one of her eyebrows in the church pew, and dreadfully frightened a young man sitting next to her, who thought it was his mustache.

"My dear," said John, on observing new striped hose on his only heir, "why have you made barber's poles of our Ernest's legs?" "Because he's a little shaver," was the reply.

DON'T bother editors when busy. Quilp stepped into the imperial sanctum this morning to ask what he'd better write about. "Write about?" growled the disgusted chief, "I think you had better right about face!"

A WELL-KNOWN Norwich justice of the peace subscribed five dollars to a relief fund recently, and on returning to his office found a couple waiting to be married by him. He performed the ceremony, and received five dollars from the delighted swain. Thus was benevolence compensated. Another man of the same place refused to subscribe, and shortly afterward was informed that his mother-in-law had come to stay a month with him.

COULDN'T BEAT HIM.—A Yankee having told an Englishman that he shot, on one particular occasion, nine hundred and ninety-nine snipe, his interlocutor asked him why he didn't make it a thousand at once. "No," said he, "it's not likely I'm going to tell a lie for one snipe." Whereupon the Englishman, determined not to be outdone, began to tell him a story of a man having swam from Liverpool to Boston. "Did you see him yourself?" asked the Yankee, suddenly. "Why, yes, of course I did. I was coming across, and our vessel passed him a mile outside of Boston harbor." "Well, I'm glad ye saw him, stranger, 'cos yer a witness that I did it. That was me."

BILLINGS has turned weather prophet. Witness the following:

"When roosters are observed before daylight in the morning, soreing among the klouds, and uttering lamentashuns, then look out for sum sudden weather.

"When you see 13 geese, walkin injun file, and toeing in, yu kan deliberately bet yure last surviving dollar on a hard winter, and a grate fluctuousness during the next season in the price of cow-hide boots.

"When spiders are seen climbing up the wall backwards, and frogs cough az tho they had the hickups, look out fur rain; this iz also a sure sign that children will have the measles light.

"If bees hang around their hives, and mules are seen in a brown study, a storm ov sum kind iz cooking, and yu will notis the market for herring is very shifty.

"Jist before a heavy sno storm, ov 3 foot deep, chimbly swallows are uncommon skarse, and in the moral world there iz a grate lazyness in the agytashun of the temperance question.

"If pigs squeal in the night, and grasshoppers cum oph ov their roost, and mingle in free fight, yu may hope for high winds in few weeks, and also the typus fever in yu' naborhood."

Our Mentorial Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded. If a correspondent shall expect us to give him the benefit of its early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage.

INSTINCT AND REASON.—The question which you have proposed for our consideration is one, as you are already aware, of a very complex nature. Metaphysicians for many years have been discussing it *pro* and *con*. In our "New Physiology," page 599, an effort is made to present clearly the phrenological difference, and we think with much success. However, as you request some other data for the discussion of the subject, we will endeavor to comply.

Mr. Darwin, in his "Descent of Man," endeavors to sustain his theory of the close relation subsisting between the ape and man by asserting that "there is no fundamental difference between man and the higher mammals in their mental faculties." This assertion we look upon as little more than an assertion, and the *London Quarterly Review*, in commenting upon many of the positions of Mr. Darwin, discusses at considerable length the more apparent differences between brute and human intelligence. In order to see our way clearly, it is necessary first to define what the mental powers of brutes consist of, and what the human. Now *instinct*, which is commonly attributed to the brute creation, may be considered as made up of four mental operations or actions. *First*, that in which impressions result in appropriate movements without the intervention of sensation or thought. This is an action to which the nervous system administers especially, and is particularly seen in cases where animals have been injured. For instance, the fact is well known that where, through a fracture of the spine, the lower limbs of a man are deprived of the power of feeling, the foot may, nevertheless, withdraw itself from tickling, just as if sensation were consciously experienced. *Second*, the nervous system administers to action in which influences or stimuli from without result in sensations, through the agency of which their due effects are wrought out; in other words, *sensation*. *Third*, that in which impressions received result in sensations which give rise to the observation of physical objects. This

is known in metaphysics as "sensible perception." *Fourth*, that in which sensations and perceptions continue to coalesce and combine in more or less complex association, according to the laws of the association of sensible perceptions. This department is defined generally under the head of "association."

If we go beyond these four actions of the nervous system, we find our ourselves intruding upon the sphere of human thought. *Sensation* is not *thought*, and it is plain that no amount of the former would constitute the simplest condition of the latter, although sensations or impressions make up the conditions for the existence of thought or knowledge. Now, let us go beyond the four groups which we have given, and consider what there is possessed especially by man which contributes to his faculty of *reason*. The nervous system of man has an additional or fifth mode of action in which sensations and sensible perceptions are reflected on by thought and recognized as our own impressions, and we ourselves recognize ourselves as affected and perceiving. This is the department of *self-consciousness*. Again, there is a mode of action in which man reflects upon his sensations or perceptions, and asks what they are and why they are. In other words, he *reasons*. Now, to use the language of the *Quarterly Review* on this subject, "these two kinds of action [self-consciousness and reason] are deliberate operations, performed as they are by means of representative ideas implying the use of a reflective representative faculty. Such actions distinguish the intellect or rational faculty." Again: "All persons, we think, will admit the truth of the following proposition: Two faculties are distinct, not in degree, but in kind, and we may possess the one in perfection without implying that we possess the other also. Still more will this be the case if the two faculties tend to increase in an inverse ratio. Yet this is the distinction between the instinctive and the intellectual parts of man's nature." Animals do not know that they know, or that they know themselves in knowing. If brutes possessed a rational nature, or the germs of a rational nature, it seems to us that long before this such germs would have become so developed that they would be unmistakably pronounced or manifested, whereas no difference is appreciable since the time of the earliest known fossils. To impute reason to the animal is to give it capacity for improvement. The very spirit of reason is growth and development, whereas if we select from among animals those commonly re-

ceived as the most intelligent, we find no marked difference between their nervous action and the earliest records of nervous phenomena in animals of the same class. No brute has the faculty of articulate rational speech. They have no self-consciousness, properly so called, and no perception of the difference between truth and falsehood, right and wrong—no moral sense.

LATE STUDY.—Is the mind fully as capable of improvement after the thirty-fifth year as before? Can a person of ordinary abilities become as good a linguist, or musician, or mathematician, commencing to study after that age? Will it pay to begin *any study* with the expectation of becoming proficient after that time of life?

Ans. The mind is as capable of grasping subjects of importance after thirty-five as before, but in general it is not so facile, so pliant. It has acquired its own channels of thought, and does not so readily take on new ways. It is more like a tree that has become pretty substantial; it is not so easily trained or bent. A person may become a good linguist after that age, but it would take probably a third more time than it would at eighteen or twenty. One could learn the science of music, but would not become so good a practitioner. In fact, no person can become a first-class violinist or pianist who does not begin pretty early. There are certain muscles in the hand which must be trained to act in the direction of musical execution, in obedience to the will, before they become rigid, or before the day of their highest order of improvement has passed. One can study mathematics and make good progress, but we believe that all studies which require much mental training are more profitably pursued before the twenty-fifth year. We have heard of a man who is teaching Greek in one of the institutions of learning who was not able to read his own name in print at the age of thirty, and he is said to be one of the best of Greek teachers. We do not now recall his name or his location. It is said, however, that when he gets provoked at the boys, and gives them an overhauling in English, he gives them shocking grammar, because he did not early accustom his mind to grammatical forms of utterance in his own language. He, no doubt, speaks grammatical Greek, because he studied the grammar with the language. Early culture is best, most easy; but later culture is not to be neglected, though the highest success is not to be expected after thirty-five years of age, especially in music and in language.

DANDRUFF.—Will you be kind enough to inform me through the *JOURNAL* the *cause* and *cure* of dandruff?

Ans. Dandruff is a flaking off of the scarf skin, with perhaps effete matter which is discharged from the surface of the body through the pores of the skin. If the hair be kept short, and the head be shampooed every day, and the hair be thoroughly brushed, the dandruff can be kept down.

FIRST DEVELOPMENTS IN CHILDREN.—What three faculties of a child's head are first developed?

Ans. Alimentiveness, Individuality, and Adhesiveness.

SUPERFLUOUS HAIR.—You would much oblige me by answering, in your next issue of the *PHRENOLOGICAL JOURNAL*, the following question: If my forehead is naturally high, but much overgrown with hair, so that it appears to be very "low," how may the superfluous hair be gotten rid of?

Ans. Either by pulling it out or skinning, whichever you prefer. Some very silly persons pull it out; others shave it off. But very foolish ones may skin it, if they prefer.

A BODY WITH TWO HEADS.—How or why is it that the State of Rhode Island, and also Connecticut, has two capitals? Has each capital city a capitol building and other State edifices?

Ans. "Rhode Island" and "Providence Plantations," as they were formerly called, were partially, if not really, separate communities, Rhode Island proper being an island, while Providence Plantations was located on the mainland. Of course each settlement struggled for growth and prosperity; and when government began to be established, it was an important question whether at Newport the capital should be located, or at Providence; and each colony or section has maintained its capital buildings, and had, biennially, the Legislature.

There was a settlement at New Haven, in Connecticut, and another in the neighborhood of Hartford. Each thought itself important and wanted the capital. They compromised by having two.

Forty-five years ago, the school geography used to give for the little State of New Jersey three capitals—Trenton, Princeton, and Elizabethtown. Trenton, although quite at one side of the State, has come to be the sole capital. It outgrew Princeton and Elizabethtown, and the strength of the State seems to have tended to the establishment of a single capital in that State. Elizabeth, as it is now called, is of late years growing rapidly, and will soon be, if it has not already become, larger than Trenton.

There is a struggle in Connecticut to get the capital at Hartford; and New Haven, located as she is quite at one side of the State, is satisfied if she can have half. There is a State-house and other capital buildings in each of these semi-capital towns, and the Legislature is held in each on alternate years.

SALT.—Do you think too much salt is injurious to the system? Do some persons need more salt than others?

Ans. "Too much" of anything is injurious. We think most people eat too much salt. If one eats more than the constitution requires, the system has to get rid of it as foreign material. Meat-eating animals eat no salt at all in their

natural state, and no cat or dog would eat meat, however slightly salted, if they could get that which is entirely fresh. The flesh of those animals which are eaten as food doubtless contains enough of the salt element for the health of the eater. Men learned to use salt by slaughtering an ox, and being obliged to preserve the major part of it by salting it. If all men could get fresh meat whenever they desired, there would be no salt meat required, and in a generation or two the habit of eating salted meat would die out. It is only the vegetable-eating animals that will accept salt; and we fancy that if cattle could run at large, and have natural grass from unexhausted soils, they would eat that grass only which had enough saline matter in it for their constitutional needs. It is said that buffaloes visit the salt licks only in the spring, when the grass is immature, and the head ones go to the lick and satisfy themselves; and as they turn about, the tail of the drove is compelled to reverse its order of march, and probably not more than one in five of a thousand buffaloes gets a touch of the salt. As they return southward in the fall, we are informed that they do not seek the licks. There is altogether too much salt eaten even in the cities, and there is three times as much eaten in the country as there is in the cities where fresh meat is available. The butter eaten in the country has three times as much salt in it as that which is salable in cities. Most people eat far too much salt.

What They Say.

ANOTHER TEMPERANCE LECTURE. — A correspondent sends us some of his own experience:

"For more than twenty years I have been subject to sick-headache, and for the most of that time I have been occupied as book-keeper and salesman in a large village store. During the busiest season, until within a year or two, every few days I would have a severe attack of sick-headache that would last from twelve to twenty-four hours, utterly prostrating me. I then drank from three to eight cups of strong coffee daily. About twelve years ago I was recommended to smoke, which I did for more than ten years, burning from five to twenty cigars a day. My system becoming more and more debilitated, and the headache severer, I was at length advised to take 'bitters,' which I began doing by using 'gin and bitters' three times daily. This seemed to revive the flagging brain and nerve-power for a time, but the headaches increased somewhat in frequency and power, making it seem impossible at times to hold up my head. On the 30th December, 1869, I smoked six cigars and drank four glasses of 'gin and bitters,' doing a heavy day's work in buying and settling for cotton, selling goods, etc. On the morning of the 31st I awoke with a headache

so painful that I lay perfectly quiet, feeling as though it would kill me to move a muscle. At about ten P.M. I felt sufficiently recovered to sit up and eat for the first time for more than twenty-four hours. I told my wife that for twelve months I did not intend to smoke one whiff of tobacco or drink one drop of spirits or wine. A few days afterward I was asked to drink, and I told the crowd of my pledge, when I was laughed at. But the twelvemonth rolled round, and I had not broken my pledge, and now had no desire to do so. The very day that my pledge was up, my wife gave birth to a daughter, when I again promised that while that child lived I never would smoke or drink any intoxicating beverage. My wife had been also an excessive user of coffee, and the bane of her life was neuralgia in the face. I finally said to her, 'You drink too much coffee; the stimulating effect is killing you with pain in the face; you must reduce yourself to one cup a day, and that not so strong as you have been using.' She did so, and the neuralgia was soon nearly stopped by this course. As a further step, we both ceased using tea and coffee entirely, and her neuralgia has ceased, while my spells of headache only come once in five or six weeks, and are easily controlled by the use of cold or warm water. I believe these attacks to be the remnants of a once entirely deranged organization, caused by my irregular mode of life. 'Be temperate in all things.'"

DRUNKEN LEGISLATURES. — OFFICE HOUSE OF REPRESENTATIVES, U. S., WASHINGTON, D. C., Jan. 3, 1872.—TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL—*Dear Sir*: I observe in your JOURNAL for January the statement that "it is notorious that sober, temperate men are the exception among our members of Congress."

This statement is calculated to create a very false impression, yet I doubt not it was made with a full conviction, on your part, of its truth. I have been for twelve years closely connected with Congress, and have known, more or less well, nearly every member of Congress during that period; and I have no hesitation in saying that the representation made in your article is entirely incorrect.

A large number of the members of the present Congress are members of the Congressional Temperance Society. Of those who are not members, the great majority are as sober, temperate men as can be found, in like conditions, anywhere in our country. There were two conspicuous cases of inebriety in the Forty-first Congress, but both of them have been superseded.

Before the war, the percentage of drinking men in Congress was quite large. Since that time it has been declining, until now it forms an inconsiderable proportion of the whole.

A contrary impression does, I know, prevail—the result, in part, of misconception, in part of designed misrepresentation—but it is as incorrect

as it is injurious to our electoral system of government. Respectfully,

[We omit name, and print the above most cheerfully. We are not personally acquainted with each and every member of Congress, nor of their personal habits. But it is notorious that some of the members are, or were, a disgrace to the nation, because of their drunkenness. We are also aware that active steps were taken not long ago by a few of the temperance members to bring about a reform in the habits of those who drank. If they have succeeded so well in Washington, we hope the good example will be followed in each of our State legislatures, and every member become, what the people have a right to demand of him, a *strictly* temperate man, or else resign his seat. Nor would we stop here. It is our right, as it is clearly our interest, to be represented in every public office by temperance men. The time is coming when we will have none other, and tippling politicians may as well take notice that they must quit drinking, or quit the office they disgrace.]

A GOOD MEMORY.—Here is one from a clergyman, a resident of Illinois:

Dear Sir—The citizens of Illinois ought to thank you for your portrait and sketch of Hon. E. B. WASHBURN in your January number. All parties honor him.

Rev. Mr. —, pastor of Presbyterian Church, Clinton, related to me the following incident, which I beg to whisper in your private ear:

Some years since the Synod met at Galena, the residence then of Mr. Washburn. One evening he gave an entertainment to that body. From seventy-five to a hundred strangers were present, and greatly enjoyed the occasion. Mr. Washburn and wife, of course, were introduced to each stranger guest. During the evening, as Mr. W. mingled with his company, he addressed each man by name, and when they retired in a body, and he gave the farewell hand, he made no mistake in their names. Certainly very few have such a memory.

I am sorry to say that I read the article, etc., in a *borrowed* copy of your excellent JOURNAL.

Had designed taking it, especially after the indorsement of my friend Rev. Dr. C—, who says it is a most valuable helper to a minister of the Gospel. But I was disappointed when the year commenced in my money matters. Methodist preachers seldom have any allowance for books, magazines, etc. Salaries are generally based upon the minimum estimate of bare *living* expenses. The people want us to be up with the times—posted in all sciences—but seldom furnish the means requisite. We have to find our own straw of which to make our sermons—bricks.

The time *may* come that will find me a regular reader of your JOURNAL.

I was so pleased with the January number, loaned me by my friend Corman, editor of our local paper, that I felt like expressing my thanks, and sending you the incident as part pay.

Respectfully yours, * * *

Pastor Methodist Church, etc.

[Why will not church members "take the hint," and supply the PHRENOLOGICAL JOURNAL to their preachers? Those who do it will have live, fresh, crisp, stirring sermons preached to them which will feed their hungry minds. Try it. We charge only club rates to clergymen.—Ed. A. P. J.]

Literary Notices.

There is a kind of physiognomy in the titles of books no less than in the faces of men, by which a skillful observer will know as well what to expect from the one as the other.—BUTLER.

OUR AMERICAN MONTHLIES.—It is not too much to claim for our leading magazines that they are among those which lead the world. The best intellects and some of the most scholarly minds are employed upon them. The reading public appreciate and patronize the efforts of publishers to provide the very best of mental pabulum. Instead of a circulation of a thousand or two, the best of our magazines reach fifty, and even a hundred, thousand copies each issue. Their average price is \$4 a year.

THE ATLANTIC MONTHLY has been—and will probably continue to be—the most scholarly and purely literary of all the American magazines. It is written by scholars, chiefly American, for scholars, and makes no effort at display or sensation. It is without pictorial illustrations, but abounds in the best poetry, criticism, and sketches of persons and places. Osgood, Boston, publisher.

HARPERS' NEW MONTHLY—always *new*, of course, though now in its forty-fourth volume, made up from the most racy materials gathered from all sources. It is a complete picture book, story book, and something of all sorts, for all sorts, to be found in the world of magazines. Its writers are both European and American, and it claims to furnish the greatest quantity of matter for the least money. Harper Brothers, New York.

THE GALAXY has won its way to popular favor by the employment of popular writers, and by securing novelties at home and abroad. When Mark Twain gave his "Experiences in Editing Newspapers," and in "Agricultural Experiments," and when Mr. Reade "Put Yourself in his Place," and Miss Logan went to the Yo-Semite, everybody read the *Galaxy*. Some of its state papers reminiscences also attracted attention. Sheldon & Co., New York.

SCRIBNER'S MONTHLY, successor of *Putnam's*, *Riverside*, *Hours at Home*, all of whom it swallowed at one gulp, is pushing vigorously for favor and fortune. Its pictorial descriptions of remarkable scenery, its racy romances, and its poetical effusions are striking features. Money, brains, enterprise, experience, and push will send *Scribner's Monthly* up among the fifty thousands or more, and make it a valuable property. Charles Scribner & Co., New York.

LIPPINCOTT finds special favor South and West. It is edited with ability; employs good writers of both sexes, American and European, and covers the same ground cultivated by other first-class magazines. If it does not make itself felt, or if it

be not regarded as a necessity in the world, neither is it in any respect offensive; it is at once clear, dignified, proper, with a touch of the reformatory spirit in some of its articles. Lippincott & Co., Philadelphia.

OLD AND NEW was started under Unitarian auspices, but changed its management and became a magazine of general literature. It aims to be popular, without resorting to low or cunning tricks, and has secured the respect of the public. Whether it shall become a power in the world, depends upon the amount of brain-force put into it, and of "material aid" put behind it. Roberts Brothers, Boston.

Of other class journals and magazines, scientific, mechanical, agriculture, musical, fashion, etc., there is a long list whose titles and terms are given under the heading of "OUR CLUBBING ARRANGEMENTS FOR 1872." All have their peculiar merits, and readers may select whatever suits them best.

We may remark, in conclusion, that there is but one PHRENOLOGICAL JOURNAL now published. We wish there were a hundred good ones. But "a little heaven leaveneth the whole lump." One such JOURNAL finds its way into all parts of the world.

PHYSIOLOGY OF THE SOUL, AND INSTINCT AS DISTINGUISHED FROM MATERIALISM. By Martyn Paine, A.M., M.D., LL.D. Professor in the Medical Department of the University of New York. 8vo.; pp. 707. Price, \$5. New York: Harper & Brothers.

The distinguished author, though verging on fourscore years, retains his vigor, and writes with a fluent pen. This is a work for scholars, theologians, and divines. After the main work, which the title sufficiently designates, we have in the volume supplementary demonstrations of the divine communication of the narratives of the Creation and the Flood. He denies to animals the quality of reason which Darwin and others accord to them. His inferences in regard to the soul and psychology are all based on physiology and anatomy. He shows us the relations between body and soul.

THE LIFE AND TIMES OF THE REV. JOHN WESLEY, M.A., Founder of the Methodists. By Rev. L. Tyerman, author of "The Life and Times of Rev. S. Wesley, M.A." (father of the Revs. J. and C. Wesley.) In Three Volumes. Vol. I.: pp. 564, 8vo. Price, \$2 50. New York: Harper & Brothers.

Of all good men, whether they write, preach, or pray, it may be said "their works do follow them." As time rolls on, these moral and intellectual luminaries will gather magnitude and brilliancy by which the world shall be made greater and better. Besides innumerable sketches of this remarkable man, six lives have already been published; and the great body of worshippers who follow his lead are daily increasing in numbers and in influence. Schools, churches, seminaries, and even universities, are established in his name to teach the doc-

trines which he taught, and civilization has good cause to thank God for John Wesley. Whatever else may be claimed for him or his work, it is truth to say that Methodism is a civilizer.

WILD MEN AND WILD BEASTS; or, Scenes in Camp and Jungle. By Lieut.-Col. Gordon Cumming. 12mo; pp. 372. Price, \$1 50. New York: Chas. Scribner & Co.

Here is sensation in earnest. Who has not read Gordon Cumming's "Hunts in South Africa?" He kills tigers, lions, elephants as our country boys hunt and kill squirrels. The reader is sometimes incredulous at the wonderful narrations of the adventurer, but Gordon Cumming was an English soldier who went to India in early life to do duty on the battle-field. He preferred life in the jungle. Getting his fill of this he returned to his beautiful home on the river Ness, in Old Scotland, to write out his wonderful experiences, and here we have it in a handsome volume.

CHARACTER. By Samuel Smiles, author of "Self-Help," "Life of the Stephensons," etc. 12mo; pp. 387. Price, \$1 50. New York: Harper & Bros.

The educational influences of this author's works are most valuable. He encourages and stimulates the mind of his reader. Here are mottoes under which he writes:

"Unless above himself he can

Erect himself, how poor a thing is man!"

"Work as if thou hadst to live for aye;

Worship as if thou wert to die to-day."

ROUND THE WORLD, including a Residence in Victoria, and a Journey by Rail across North America, by A Boy. Edited by Samuel Smiles. With Illustrations. 12mo; pp. 289. Price, \$1 50. New York: Harper & Bros.

Samuel Smiles is widely known throughout the English-speaking world for his admirable literary productions, such as "Brief Biographies of Distinguished Characters," "Self-Help," "Life of the Stephensons," "The Huguenots," etc.; and now we have a second edition of Samuel Smiles—Can it be said enlarged and improved? Has the boy inherited something of the father's gifts? The book is nicely printed, and must become popular. We shall hope to hear more of this "Boy."

A COMPARATIVE HISTORY OF RELIGIONS. By James C. Moffat, D.D., Professor in the Theological Seminary in Princeton. Part I.: Ancient Scriptures. 250 pp., 12mo. Price, \$1 75. New York: Dodd & Mead.

The author proposes to give a general view of all religions in their relations to one another. He deplores the present chaotic state of things, in which superstition and unbelief find refuge, and the wildest assertions elude exposure. Buddhism, Parseeism, Brahmanism, etc., will be explained. The author concedes that man is a religious being, and he attempts to describe his relations to God. The work must prove acceptable to all readers.

THE SCIENCES OF NATURE VERSUS THE SCIENCE OF MAN. A Plea for the Science of Man. By Noah Porter. Small 12mo; pp. 98. Price, \$1. New York: Dodd & Mead.

The name of the author and the title of the book are sufficient to secure many readers to this nicely printed and handsomely bound little volume.

THE THEOLOGY OF THE NEW TESTAMENT. A Hand-book for Bible Students. By the Rev. J. J. Van Oosterzee, D.D., Professor of Theology in the University of Utrecht. Translated from the Dutch, by Maurice J. Evans, B.A. 12mo; pp. 437. Price, \$1 75. New York: Dodd & Mead.

The author is well known as one of the contributors to Lang's Commentary. He is regarded as one of the ablest Dutch divines of the Evangelical school. The work can not fail to interest all students in theology, as well as laymen interested in the study of the Scriptures.

THE WONDERS OF VEGETATION. From the French of Fulgence Marion. Edited with numerous Additions, by Schele de Vere, D.D., LL.D., of the University of Virginia, author of "Studies in English," "Americanism," etc. With 61 Illustrations. 12mo; pp. 283. Price, \$1 50. New York: Chas. Scribner & Co.

Another of the "wonder books;" but why wonderful? Simply because the objects pictured and described are not generally known to the world in their length and breadth. Messrs. Scribner made a happy hit when they blocked out this series of remarkable natural objects.

SCIENCE FOR THE YOUNG—WATER AND LAND. By Jacob Abbott, author of "The Franconia Stories," "Marco Paul Series," etc. With numerous Engravings. 12mo; pp. 330. Price, \$1 50. New York: Harper & Bros.

This is in the same line as the "Wonder Books" noticed elsewhere. It describes wonderful objects on sea and land, such as trees, mountains, waterfalls, headlands, earthquakes, glaciers, icebergs, and the like. Quite as fascinating as the novel and far more instructive. Where such books are placed within the easy reach of the young, dime novels would be counted trash.

READING WITHOUT TEARS; or a Pleasant Mode of Learning to Read. By the Author of "Peep of Day," etc. 292 pages, 18mo. Price, \$1 25. New York: Harper & Brothers.

Here are object lessons; a little book full of pictures for little folks. It was a happy thought of this author to teach by symbols, and she has given some hundreds of woodcut illustrations to aid the young student in learning to read. The book should supersede those now in use, which were—in principle—made a hundred years ago.

CASA ILANNA (Good News)—Love, Woman, Marriage; the Grand Secret. A Book for the Heartful. 12mo; 404 pp. Price, \$2 25. Boston: Randolph Publishing Co.

Here is what the publishers say of this work: "This is the ablest and grandest book that ever

fell from human pen. No description, critique, or synopsis can begin to do justice to the mighty work, which ought to be bound in gold and be on the table of every man, woman, and youth in the land and in the world." We suspend comment, deeming the above eulogy amply sufficient for the present.

BORDER REMINISCENCES. By Randolph B. Marcy, U. S. Army, author of "The Prairie Traveler," "Thirty Years of Army Life on the Border," etc. 12mo; 396 pp. Price, \$2. New York: Harper & Bros.

General Marcy succeeds no less brilliantly in authorship than in generalship. He is well known in magazine literature through his sprightly contributions. We now have him once more in book form. His "Army Life on the Border" and his "Prairie Traveler" may be found in our libraries. His last, if not his best, is worthy a place on every center-table.

THE AUGUST STORIES—Hunter and Tom. By Jacob Abbott, author of the "Juno Stories," "The Rollo Books," etc. 18mo; pp. 338. Price, \$1 50. New York: Dodd & Mead. This is No. Two of a series by this popular author. Young writers, mere beginners in story-telling, should read Mr. Abbott, who is a model story-teller.

SINGULAR CREATURES, and How They Were Found; being Stories and Studies from the Domestic Zoology of a Scotch Parish. By Mrs. George Cupples, author of "The Little Captain," "Driven to Sea," etc. 18mo; pp. 333. Price, \$1 50. Boston: Lee & Shepard.

Half a story-book, half a popular instructor in natural history, the tendency of which is to make us more merciful to animals and to man.

ALLEGORIES OF LIFE. By Mrs. J. S. Adams. Small 4to; pp. 93. Price \$1 25. Boston: Lee & Shepard.

We should call these allegories moral essays written in the most chaste language by a highly cultivated mind, who transports the reader to realms above the senses. Her true vocation is in religious literature.

THE AMERICAN BARON. By James De Mille, author of "The Dodge Club," etc. With Illustrations. 8vo; pp. 132. Price, \$1. New York: Harper & Bros.

Professor De Mille finds pleasure and profit in his pen. Is it too much to claim for him the title of the New Brunswick Dickens? His stories are numerous and popular.

THE HOOSIER SCHOOLMASTER. A Novel by Edward Eggleston. With 29 Illustrations. 12mo; pp. 226. Price, \$1 25. New York: Orange Judd & Co.

Mr. Eggleston writes vividly of objects and experiences which have come under his own observations. His criticisms and caricatures are all given in a kindly spirit, and suggest practical remedies.

TEMPERANCE TRACTS, issued by the National Temperance Society and Publication House. 12mo. Price, \$1. New York: J. N. Stearns.

We have here a series of one hundred temperance tracts, nicely bound in a portable volume. Lecturers, debaters, editors, and others may find material here for use on all occasions.

STARLIGHT. A Norwegian Serenade. Arranged by J. J. Watson. New York.

An exceedingly sweet and sympathetic composition, and adapted to the use and appreciation of average musicians. Prof. Watson has arranged it for the piano. Price 80 cents, and for piano and violin, price 40 cents.

"OH, AINT I GOT THE BLUES!" A Humorous Song, written and composed by Miss A. A. Chapman. Published by McNab & Co., Brooklyn, N. Y.

Miss Chapman has given us a neat little song which hits off well that gloomy and forlorn state of mind so commonly known as the "blues." Let those troubled with such fits, by all means get the piece, and sing it.

THE NEW YORK OBSERVER YEAR-BOOK FOR 1872. Price \$1. New York: Sidney E. Morse & Co.

In the present volume we have 200 pages of the most valuable statistical matter; the astronomical department is full, and so also are those of the civil and commercial, the ecclesiastical, the educational, the agricultural and the miscellaneous. A list of all the Congregational ministers in North America is given, so also those of the Protestant Episcopal Church, the Lutheran, and those of other leading denominations.

A RENT IN A CLOUD. By Charles Lever. 4to; pp. 111. Price, 50 cents. Philadelphia: Petersons.

In the absence of matter more instructive and weighty, this will do to while away a day or a night, as best suits the novel reader.

THE NATIONAL ENCYCLOPEDIA. A Compendium of Universal Information, by L. Colange, LL.D. No. 2. Price, 40 cents. New York: Francis B. Felt & Co.

As a compact work for reference, nothing can be better than this. It is to be completed in eighteen semi-monthly numbers. We commend it as every way worthy of the most liberal patronage.

THE NATIONAL TEMPERANCE SOCIETY, No. 58 Reade Street, New York, publish 72 pictorial temperance tracts for children in one packet, price 25 cents; also, 46 temperance assorted tracts in packet No. 2, price 25 cents; also, **TEMPERANCE AND THE PULPIT**, by Rev. C. D. Foss, D.D., 10 cents; and, also, **LIBERTY AND LOVE**, an appeal to the conscience to abandon the wine cup, by Rev. Henry Ward Beecher, 10 cents.

THE SOUTHERN FARMER, of Memphis, Tenn., is edited and published by M. W. Phillips, who is thoroughly posted in regard to blooded stock, culture, crops, and all things relating to the farm or plantation. Read the *Southern Farmer*.

ANTI-TOBACCO JOURNAL.—To be published quarterly or monthly, according to circumstances, by George Trask, Fitchburg, Mass.

No. 1 is now ready. It makes quite a respectable appearance, and will, do doubt, do good service. Here is the editor's address.

Advanced in life, as I am, whatever I do hereafter against the destructive habit of using tobacco must be done soon.

In my labors for twenty years I have amassed a large amount of anti-tobacco material, in the shape of essays, lectures, letters, and statistics, now lying unprinted in a chaotic state. Were this material arranged and published, it might do much good now, and far more when we are dead and gone.

I wish to publish a journal embodying this, and also new material coming in daily from every quarter; I wish to send it to all friendly newspapers, to all reading-rooms of Christian Associations, colleges, and seminaries—**GRATUITOUSLY**.

As it battles the most **POPULAR VICE** in church and state, it cannot pay its way—nor half pay its way. Hence I must depend upon a few friends of large **HEART** and large **MEANS** to send me money to support this **UNPOPULAR** work.

Those interested may remit what they like, and receive an equivalent in the numbers as issued. It is a purely missionary work, and should be generously supported by all who wish well to the race.

ANNUAL REPORT OF THE MANAGERS AND OFFICERS OF THE NEW JERSEY STATE LUNATIC ASYLUM at Trenton. A cursory glance through the report of Dr. Buttolph assures us of the excellent condition of this—one of the best conducted of all our American—asylums. We shall not be surprised to learn of the greater percentage of recoveries obtained in this institution over those in others. Its superintendent is not only one of the best educated physicians in the country, but he understands psychology, and knows how to treat infirm minds as well as infirm bodies.

MESSRS. HARPER & BROTHERS publish, in No. 370 of their Library of Select Novels, a story by Lawrence W. M. Lockhart, entitled **FAIR TO SEE**. It is an octavo pamphlet of 160 pages. Also, **BLADE-O'-GRASS**, by B. L. Farjeon, with numerous illustrations. Price, 35 cents.

THE TRIBUNE ALMANAC FOR 1872, best of all the political and statistical annuals issued, price 20 cents. **THE LEDGER ALMANAC FOR 1872** is also just published. It will be found convenient to those who have occasion to consult it. **THE WORK AND PLAY ALMANAC FOR 1872** is published by Milton Bradley & Co., Springfield, Mass. It contains many illustrations, and sells for 15 cents.

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

VOL. LIV.—No. 4.]

April, 1872.

[WHOLE No. 399.]



WILLIAM H. ASPINWALL, THE SUCCESSFUL MERCHANT.

IN our portrait of this gentleman we find several well-marked characteristics. In the first place, the temperament has a strong intermixture of the motive element, as shown clearly in the well-pronounced features and

the strong and abundant hair. The latter has an individuality of its own; there is a magnetic energy in it, a wiry positiveness, which indicate vital strength, tenacity of life—such an organization as that which

lasts into genuine old age, and then retains most of the elements of efficient work. The face is long, in keeping with the stature of the body. It has an earnest, homely expression, the impress of real feeling, of real purpose. It is not a face which affects phases of sentiment which are not felt. We are reminded, as we look upon it, of the physiognomy of the late President Lincoln, whose face could not dissemble. The earnestness, the honesty, and the very grandeur of that great man's character shone through his bold and wrinkled lineaments.

Here we have strongly-marked perceptive faculties, unusual power of discrimination, and capital off-hand judgment. He is by no means a man of precipitancy, yet his opinions are formed quickly. There is a comprehensiveness of survey in his consideration of practical affairs, which enables him to converge toward the point of decision, and so conduct his deliberations with much more rapidity than most men who are engaged in mercantile affairs.

His opinions are held with steadiness. He has unusual pride of character, but enough of delicacy, enough of sentiment, enough of modesty, to prevent him from being in any way overbearing or arrogant. He has that calm, discriminating, utilitarian view of human nature which enables a man to measure men and affairs, and to accord to a subject a due amount of consideration. His pride of character, moreover, consists in large part in a sense of duty done, and in that confidence which proceeds from successful effort.

He is not governed in his social and other relations by the ways and usages of society, but rather by his sense of expediency and propriety. He does not believe in fashion or conventionalisms; he is the man to avoid a certain line of conduct for the very reason that it has the general observance of men. He has that independence which leads him

to avoid anything like ostentation, although he doubtless is jealous of the rights and privileges which belong to him as an eminently successful business man, and which should be accorded to him by society at large for whatever interest he may exhibit in the welfare of his community or any meritorious enterprise.

He is a man of action rather than a man of words. As a talker he keeps his subject clearly in view, and having expressed his opinion in a style brief and clear, each word conveying a direct signification, he is done. So, too, his action is direct and definite. Having fully made up his mind as to the course to be pursued in any case, he goes directly about it, keeping the one object in view.

There is strength of social feeling exhibited in that long, prominent chin. So also in that feature we find the evidence of healthful physical functions, a vigorous circulation of the blood, which enlivens brain and muscle, and contributes to a high order of health.

Some men achieve fortune by brilliant strokes. An opportunity offers, and they risk capital, and time, and effort successfully. Men of the type of Mr. Aspinwall do not belong to that class; they are not given to hazardous adventures. Now and then we hear of a large undertaking which requires a vast expenditure of money to prosecute it, and which seemingly has the character of a risk, set on foot by men who lead in commerce and finance; but if the trouble be taken to investigate its nature we find at the bottom substantial reason therefor. The end was foretold from the beginning. Those who interested themselves in the project knew that it would prove a success. In fine, there was a *demand* for just such an enterprise. However, it required sagacity and energy and careful manipulation to render it a success. In the gentleman whose por-

trait is before us we have one who can appreciate opportunities, and originate the ways and the means to make them available. His career abundantly proves this.

Among the names of enterprising Americans who have obtained a world-wide reputation in commercial affairs, few can claim the prominence of Aspinwall. Its early connection with the semi-adventurous spirit which characterized American maritime relations forty years ago, and which contributed so much to the growth of our national commerce; and its prominence in the bold project of connecting the Atlantic and Pacific oceans by a railroad across the Isthmus of Panama, readily account for that prominence. The subject of our sketch was born in the city of New York in 1807, of a parentage that boasts its representatives among the earliest settlers of New England. His father, John Aspinwall, was a member of the old firm of Gilbert & John Aspinwall, which was engaged in the dry goods and general commission business, at a period not long after the close of the Revolutionary war, and had its warehouse in Queen, now Pearl Street. John continued this business on his own account until subsequent to 1812, and in later years was a broker in Wall Street. Having availed himself of the advantages then afforded by his native city for a substantial education, William directed his attention to commercial pursuits, and found a congenial opening in the house of G. G. & S. S. Howland, then one of the leading business firms in the United States.

It may not prove uninteresting if we state that this house was founded by the sons of Joseph Howland, a prominent man in the early whaling business of New England, and a resident of New London, Connecticut. They came to New York as boys, and after a while commenced a small West India business. Their store was situated on South Street, where the house of Howland & Aspinwall stands to-day. Their trade increased, and with the increase they enlarged their facilities, extending their trade to Mexico, South America, the Mediterranean, and Great Britain, until they conducted the largest general business of any firm in the city.

In his clerkship young Aspinwall exhibited

many proofs of energy and sagacity, and soon became to be regarded as a very valuable assistant. About the year 1832 he was taken into the partnership, with the understanding that he should receive one-quarter of the profits of the commission business, which amounted that year to upward of sixty thousand dollars. His share of this large return in one department of the dealings of the house formed the capital upon which he acquired his splendid fortune. A few years after this, viz., in 1836 or 1837, the senior partners retired, leaving, however, a hundred thousand dollars of cash capital each in the business. The general or working partners now in the concern were William E. Howland, son of Gardiner Howland, and William H. Aspinwall. At this time the firm style was changed to Howland & Aspinwall, which it has remained without alteration for a period of thirty-five years.

The discovery of gold in California largely increased the business of the house on the Pacific, and led Mr. Aspinwall to take the initiatory steps for the establishment of steamship communication with San Francisco. He retired from active connection with Howland & Aspinwall in 1848, and gave his attention chiefly to this new and great enterprise, associating with it the building of the Panama railroad. The success of the Pacific Mail Steamship Company was thus secured, and his name, it is scarcely necessary to remind the reader, was given to the eastern terminus of the Panama railway. The new and splendid facilities which were thus early afforded, gave a marked impulse to trade between New York and the Pacific, opening the way to direct relations between Asia and America.

Mr. Aspinwall is a gentleman of retiring and modest character, rather avoiding any public recognition than seeking it. He has no official relation to record; it may, however, be mentioned that during the late war he, in company with Mr. John M. Forbes of Boston, was sent by our Government on a secret mission to England for the purpose of obtaining that country's interference in the equipment of the ironclads then being built by the Lairds. How England regarded our protest the "Alabama Claims," now so much discussed, may answer.

In his personal appearance Mr. Aspinwall can not be said to be particularly striking, although there is that in his calm features, erect and dignified bearing, and well-knit frame which indicate the man of sterling

worth and straightforward action. He has traveled considerably in foreign countries, and in the administration of his great wealth is benevolent and public-spirited, but by no means ostentatious.

HOW THE DIFFERENT FACULTIES COMBINE.—No. 3.

IN former articles on this subject we have shown the fact of the combination, the working together of faculties. We now propose to call attention to the modifications which these combinations produce in the character of the manifestations.

When two musical notes are sounded the cultivated ear will hear each distinctly, and, as it were, separately. It will also hear what might be called a third sound, viz., the combination of the two. Again, a painter looks at the color called blue, and at yellow, as they lie upon his pallet in separate masses; he mingles the two in equal proportions and makes a strong green; he mixes them in unequal proportions and he has a dark green if the blue predominates, or a very light green if the yellow predominates. But his practiced eye will see in each green that lies before him the elemental qualities which go to make it; he sees the blue and the yellow in the medium green; he sees two blues to one yellow in the dark green, and two yellows to one blue in the light green.

Let us apply these illustrations to the results of the combinations of the mental faculties. Take Combativeness and Cautiousness. If they are largely and equally developed in a man he will fire up if invaded. Instantly Cautiousness will act in estimating the dangers of a battle, the liabilities of defeat, the necessity of being on guard against the blows of the adversary, and the left arm that is used defensively in obedience to Cautiousness will occupy a position of equal influence with the striking arm which obeys Combativeness. Moreover, the advice which caution suggests to the intellect, the fear involved in the whole affair, will be shed upon the judgment from Cautiousness, and thus the language which the man will employ in response to an insult will be very different from what it would be with Combativeness large and Cautiousness moderate. Men measure their words, they weigh and carefully consider their utterances, when Cautiousness is an influential factor in the mind. But where Combativeness is large and

Cautiousness small, as we sometimes unfortunately find them, there is rashness of speech and of action which keeps the man always in hot water. On the other hand, if Caution be much larger than Combativeness the courage is not equal to the prudence, and the man suffers from hesitation. Instead of driving too fast and running into the wagons ahead, he drives so slow that the teams run into his wagon from behind; his errors are on the side of prudence, as another man's errors are on the side of rashness, boldness. Imagine, then, Combativeness and Cautiousness combined, as we combine the colors blue and yellow to make divers shades of green, and the mental results produced, according to the different degrees of these two organs respectively, will be understood.

Sometimes Cautiousness and Secretiveness act together, sometimes separately. The rabbit lacks courage and is cautious, but it has little Secretiveness. The same is true of the deer and sheep; they are cautious rather than cunning. The cat, on the contrary, is sly or secretive in a high degree, but is not cautious. If a cat be cornered she will fight a dozen men and as many dogs, and meet them half way; but when she is hunting, how stealthily she steps, how quietly she can keep watch, and wait for hours, until by a single leap she can secure her prey, Secretiveness and Destructiveness being the qualities controlling her conduct. The deer, the sheep, and the rabbit, being largely cautious, instantly flee from danger, and secure safety by their speed, while the fox, the opossum, the cat, hide through adroitness, which act in human character would be called tact and cunning to avoid the foe. A fox will sometimes double back on his track and puzzle a dog, will run through a brook where the track will be lost, perhaps run half a mile in the brook itself if he can; he will be running in a straight line and jump ten feet sideways, and then run back perhaps a quarter of a mile nearly parallel with the first track; then rush off at a tangent, and seem to show

as much artfulness as if he were guided by reason. The fox has enormous Secretiveness in character and in development. At Craighall, in Scotland, a house built in a romantic situation, on the very verge of a cliff 150 feet high, a fox, hard pressed by the hounds, took refuge in the hall or passage-way among the overcoats and hats hung upon the stand, while the dogs in hot pursuit, supposing the fox had leaped through the open window, dashed one after another through the window and over the precipice, meeting instant death; and those who witnessed the incident say the fox seemed to know what would be the result.

The combinations of Acquisitiveness in reference to business matters in men are interesting. Certain departments of trade seem to call out Secretiveness in the conduct of affairs. Some call out Cautiousness, some courage and force, some ingenuity, others taste, others sound judgment and solid understanding. A man who has active Acquisitiveness and large Secretiveness will manage any business he may attempt according to his special mental organization. If it be possible to run the business by policy and artifice and concealment, he will do it. A business which a man ordinarily developed and well-balanced would conduct on open, square, outspoken principles, he will contrive to have it done under the veil of concealment.

One who does a commission business needs but little Secretiveness. He wants good common sense and prudence to conduct his affairs wisely; but the cost price and the selling price have but little to do with him. Goods are consigned to him without a nominal price, and he sells, according to the market, higher or lower, and the consigner makes the profit or suffers the loss, paying the consignee his per-centage, and the transaction is ended.

One with large Secretiveness will buy goods of bankrupt dealers, or will buy goods at auction that have been slightly damaged; and he will be very careful to conceal the fact, and charge the highest price in selling. Some men, if it seems to be for their interest, will profess to have bought very cheaply at auction, and they always profess to sell cheaply on that account, whether they do or not; and we are informed that the gullibility of buyers, who are not judges of goods, is sometimes practiced upon by the sale of "wet goods," thus inducing buyers to believe that they are getting goods for very much less than they are worth, because they have been slightly damaged by water. And we are told that there is such a

rage for getting good bargains that sometimes merchants have taken from their shelves prime goods and dipped one corner of a roll into a pan of clean water, just to show that it had been wetted, to gratify this desire for buying goods that had been slightly damaged, with the thought that they were getting them cheaper. During a trial in a court in Liverpool, a clerk in a dry-goods store was called to testify, and when asked where he was and what he was doing at the time the transaction in question occurred, he stated that he was in the cellar "making wrecked goods;" that is to say, wetting and staining them, to be palmed off as goods from a wreck. Of course, first-class judges of goods would not be deceived as to the value by such a subterfuge, but most buyers are not good judges, and are led and influenced by the policy and cupidity of dealers through the exercise of their own cupidity. Men with large Secretiveness can not make a move in the direction of Acquisitiveness without doing it in a sly, indirect manner; their whole business career is tinged, colored, by policy which gives a disingenuous, slippery appearance to all they do. Such men are organized for detectives, for hunting out the sly ways and by-ways of tricky traders, counterfeiters, and other rogues.

Secretiveness does not necessarily make a man dishonest, but it is one of the tools which dishonesty employs to secure its results. We know men who are thoroughly honest, yet they have a non-committal way of talking and acting; they prefer to do things indirectly, dislike to have anybody know what they intend to do next, or how they intend to do it; they work *sub rosa* in all things; they like to have private marks and technical names on their goods, and to deal in articles or in kinds of business in which concealment is requisite. This may all be done without dishonesty, the principle seeming to be, what I know is my own—what I choose to tell, the world is welcome to. They will give an honest pound, but they would prefer scales that nobody else could understand. We must confess that Secretiveness, acting even under the dominion of Conscientiousness and Self-Esteem and a sound understanding, tends to discredit a man's integrity. One who goes backward and covers up his tracks will be suspected, although he has a right to do what he is doing, and may have the kindest intentions to all. We are required to "avoid the very appearance of evil," and one can hardly do this who is highly endowed with Secretiveness. This faculty throws suspicion over all one

does, but, as we say, it does not necessarily make a man dishonest, though it is the tool that dishonesty uses to carry out its purposes.

If a man have large Cautiousness and moderate Secretiveness, he will hesitate in business, will want all possible safeguards, will seek double security, yet he will not conceal his business, he will talk it up, everybody will know what he has done, or hopes to do, or fears to do; but his Cautiousness, working with Acquisitiveness, hinders and delays him in a thousand ways, and sometimes prevents his acting and involves him either in loss or in a failure to secure gain. We know men who are so cautious that they are afraid to make transactions in business until they find everybody in it, and the result is the tide of business turns about the time they invest. An illustration of this: a man well-balanced will buy when everybody wants to sell, and sell when everybody else wants to buy. Forty years ago, when, in New England, the attention of farmers was directed to wool-growing and cheese-making, there was frequent oscillation from one business to the other. There would be at one time a wild rush out of dairying into wool-growing, and then the thing being overdone, nearly everybody would make a shift to get out of wool-growing and engage in dairying. One man, cool, well-balanced, harmonious, little affected by public sentiment, and more guided by common sense and reflection, would sell his cows when everybody wanted to buy, and cows were of course at the very top of the market; and he would buy sheep when everybody was trying to get rid of sheep at any price—of course he got them at the bottom of the market—and when everybody else was out of the wool business it would begin to revive, sheep would appreciate as property, wool would increase in value in the same proportion that the over-wrought dairy business would run down. Of course everybody would want to sell cows and buy sheep; and our friend would let his sheep go at a high figure, and buy cows again at a low figure; and he got rich, while many others remained poor and wasted all their surplus earnings in unwisely changing business.

A steamboat bound up the Hudson met a fine new steamship, the Winfield Scott, on her trial trip, and every passenger being anxious to get a good view, rushed to one side of the steamboat, which great weight careened it over, and made the inexperienced think they were going into the water. Most of them ran madly to the other side, and their weight, added to the re-

coil of the boat, sent the guards on that side to the water, when they rushed back again. Somebody more sensible spoke in a loud voice, "Get in the middle of the boat, and stay there." The writer clung to the rail and let the rest run, of course fearing trouble, but not inclined to increase it by his own weight. This not only shows the effect of blind Cautiousness without judgment, it illustrates the rush from one department of business to another madly, because it seems to be going down. Thus it will be seen that courage and fear by combining produce various shades of character. Combining harmoniously, equally, a medium quality of manifestation is reached: that is to say, courage inspired by prudence—prudence fortified by courage. We see also that Acquisitiveness, the desire for gain, is modified by policy and by prudence—sometimes warped by these so that a new nature almost seems to be the result. When these are harmoniously blended, character is balanced, and harmonious, and judicious.

When we imagine how many possible combinations may exist in the human faculties, and how many changes can really be produced on forty or fifty faculties, it will not seem strange that no two people are alike. The vast variety of character and disposition is thus explained. One who is conversant with human nature, as taught by Phrenology, can easily find out the strength or weakness of the different faculties in those with whom he may associate; he has only to throw out a word or an act and see how it is received, see what response may be made, and he can thus test the strength of one's conscience or selfishness, of his Secretiveness or Acquisitiveness, and thus be able to influence appropriately the person or character in question. One who is captious and fractious in temper has to be managed with smoothness, and policy, and kindliness; one who is inclined to be secretive must be met by apparent frankness with the main motives concealed, in order to throw the suspicious individual off his guard, so that he will express himself with sufficient frankness. He that is very cautious must have all the dark corners of the subject explained—must have the propositions submitted in writing, with the privilege of a few days' reflection before he will feel at all safe to negotiate. The same light will guide the teacher, parent, the manager of men in business, clerks, or apprentices; and he who is so organized that he has the complete control of himself—is so well-balanced that he is not liable to extremes, but has every faculty strong enough to work effectively, backed up

and sustained by all the rest—is the man who, guided by Phrenology, will manage human society as the pianist will manage the instrument,

or as a skillful workman manages his tools, bringing about lawful, normal results with the least possible friction.

Department of Our Social Relations.

*Domestic happiness, thou only bliss
Of paradise that has survived the fall !
Thou art the nurse of virtue.*

RIGHT AND WRONG VIEWS OF LIFE.

TO diminish to their utmost the sorrows and the evils of life, to increase to their greatest extent its joys and pleasures, has ever been the great object toward whose attainment all the labors of men have been directed. The history of the world is but the history of humanity striving for this end; but various and often wonderful are the ways by which it has been sought, for the ideas of happiness and its attainment are almost as numerous as the inhabitants of the earth. What gives pleasure to one may create in another the feeling of disgust. One man's ideal of perfect bliss would seem a picture of misery to another. The Esquimaux would imagine for himself an icy heaven, with reindeers and sledges in profusion, and seas full of seal and walrus; but the inhabitant of a torrid country would shudder at such an ideal, and paint in its place a land of eternal summer. However, all agree this far: they make heaven of the very materials they have around them, only exalted in quality and degree. Is there music here? Then there must be music in heaven. Are there flowers here? Then flowers bloom there. Are there rivers and lakes and bright sunshine here? Then all these are there also. The most perfect state of happiness of which the human mind can have any conception has all its elements in this life and the conditions connected therewith. It cannot be otherwise; for our imagination, however active, can form nothing new. It may change the order and position of elements, but can never create any. It may select, however, and when we form our ideal of a perfect world, we place not in it the things that have been painful and disagreeable to us here. But otherwise it is only earth again. True, it is impossible for

fancy to paint the grandeur of the Christian's future home; but he can view that with pleasure only in so far as he can conceive of it as an object of contemplation, and therefore he forms an ideal world, and experiences the highest enjoyment in its prospect. Could he view this world without its evil associations, he would derive a similar pleasure from this life; and the nearer we can approach to such a view of life, in that measure will our happiness be increased. True, it would be impossible for any right-minded person to deceive himself into the belief that the world is without evil; and even if it were possible, it would be altogether unwise for him to do so. But there are a great many evils which it is far better for us never to know, and if we know them, soon to forget; and a willful and blissful ignorance of them is by no means impossible. Our minds not being capable of perceiving and grasping all there is in the universe, the more good we learn to view the less opportunity there will be for seeing evil. So the more we regard the sorrow and wickedness in the world, the less we can learn of good, and the greater must be our unhappiness.

Happiness or unhappiness, then, does not depend so much on our worldly conditions, as the manner in which we view it. If outward circumstance alone were the criterion of happiness, then those equal in this respect should be equally happy. But this is far from the truth. For of two persons in precisely similar situations, one may be enjoying a very high degree of felicity, while the other, in his wretchedness, pours forth complaints of wrongs and misfortunes. Whence arises the difference? Since they are situated alike, it can not be that one suffers more real ill than

the other. But while the one allows his mind to be wholly occupied with the little griefs and misfortunes of life, the other, thankful for the great blessings he enjoys, has no memory for the little evils that may happen to accompany them. The one grasping the rose, howls and curses when its little thorns sting his flesh, but the other, grateful for such a beautiful gift of nature, forgets the slight pricks in the pleasure he receives from its possession.

One of the greatest sources of our discontentment is found in our false estimations. We set too low a value on what we possess, and value that very highly which is out of our reach, even though it may be of the smallest importance. Men too frequently forget what a fortune they have in the possession of good health, true friends, and a good government, and worry life away because they can not enjoy its luxuries. Is there any reason why any one who has a moderate provision of food and raiment should be grieved because he can not sport a fine carriage or live in a splendid mansion? Is it probable that these would increase his enjoyment? On the contrary, the man who is unhappy in moderate circumstances would still be unhappy were all the riches and luxuries of the earth his own. Luxury and superabundance of wealth seldom increase contentment. Men who are unhappy without these are never made happy by possessing them. Yet such is the inconsistency of men that they set the very highest value on things which are of least use, and give themselves far more pain and trouble in striving for the luxuries than the real necessities of life. If objects were valued only according to the degree in which they contribute to real happiness, your gaudy and costly dress would be given in exchange for plain attire. Your magnificent residence would be worth no more to you than the convenient cottage; and a good sharp ax would be taken in equal exchange for the most precious diamond.

There is no doubt that imagination has much to do with our lives. To *imagine* ourselves happy is to *be* happy. To imagine ourselves miserable is as truly misery as though it were absolutely real. A story is related of a Frenchman whose fortune, by some chance, was reduced to \$500,000. This,

compared with what he once possessed, appeared to him as nothing. He was made wretched with the ever-increasing fear of coming to want. He seemed to see poverty staring in at his door; but he held his money with a miserly grasp, and at last, through fear of starving, committed suicide. There were many beggars then in Paris, but none so thoroughly miserable as he; and all because imagination had deceived him into the belief that he was poor. In a similar manner, half the misery in the world derives its existence from imagination alone. If used properly, this faculty would always be a source of pleasure, but too frequently it seems to prevent men from taking a true and honest view of humanity. If we can not see men as they really are, it would be far better to consider them all good than all bad. But many never fully trust humanity. Every mistake which affects them adversely they seem to regard as the predetermined result of malice. Everybody, they think, laughs at their misfortunes, and envies their success. It is only in the past that they look for those who are truly noble and honest. Surely, it is better to believe that in past ages men were better than they are now than to think them always bad; and since our happiness must all depend on the present, it is of the utmost importance that we allow the men of our own times the praise of all the virtues they possess. To believe that men's motives are good; to be charitable toward their mistakes; to allow the glow of one virtuous deed to hide many sins from our eyes, is the wisest way of viewing mankind. To regard any class of men as totally depraved, is as hurtful to our own happiness as it is absolutely false. Go to the burning shores of India, or search the wilds of Africa, or the icy regions of the poles, and you will seek in vain for the one in whose bosom no spark of virtue yet remains. True, it may seem to be faint, but never so faint that it will not sometimes glow with surprising radiance. You will seek as long for the totally depraved man as for the one who is absolutely perfect.

Life is to a great extent just what we make it; and to make ourselves wretched is no great task. To this end, a man need not put on sackcloth, or destroy his property, or shut himself up in a dungeon. He need not even

change, in the least, his outward circumstances. But let him view life on its darkest side, and think that no evil befalls others so great as himself; let him attribute to men the worst motives in every action, and regard none as worthy of his confidence, and he will need little more to make his misery complete. To make life as agreeable as possible, we should estimate at their true value

our great general blessings; we should view the virtues of men through magnifying glasses, and, as far as possible, allow the glory of their good deeds to dazzle our eyes to their faults; and then, though our positions in life may be humble, yet the world will not appear to be so much a vale of tears, as a place in which to be thankful and contented.

J. L. M.

SEVENTY-EIGHT—AN OLD MAN'S BIRTHDAY MUSINGS.

BY MRS. JULIA A. CARNEY.

How brief the moments now appear
Since (pausing in my childhood's play)
I boasted of another year,
"Hurrah! I'm eight years old to-day!"

Life was before me! None had told
How dark and turbid ran its stream;
That all its treasures, love, fame, gold,
Were but the phantoms of a dream.

Eighteen to-day! No purer pride,
No wilder, more exultant joy
Hath life, than thus to stand beside
Its rushing stream—half man, half boy!

The stream is but a brooklet there!
Not yet is heard the mill-wheel's whirl;
We muse beside its waters fair.
Of sunny brow or graceful curl.

Fall soon the darker waves appear,
No more we muse amid the flowers;

But Care, stern miller, takes each year
More ruthless toll from all our hours

I'm seventy-eight to-day! I stand
Upon the brink of that dark stream
Whose other shore is that fair land
Whereon doth light immortal gleam.

Well, I am ready! Life hath been
A pleasant yet a weary way;
I would not tread its paths again,
Nor younger grow a single day.

It hath not one experience brought
So dark that I could spare its woe;
Each sorrow hath its lesson taught,
"Nearer my God" and Christ to grow.

I fear not death, for He hath trod
The path before me; He hath given
This faith. It is the path of God,
The path to His eternal Heaven.

TACT IN SOCIAL INTERCOURSE.

BY REV. E. B. SANFORD.

IT is worth a great deal to know how to touch people in the right way. The man whose nature is thermometer-like in its susceptibility to the atmosphere and condition in which those persons live whom he meets from day to day, has an incalculable advantage over one who lacks in this respect.

The possessor of this gift of tact is always making friends and finding a warm place in their hearts, while his neighbor, who is fully his equal in other endowments, is constantly placing himself in a position where he both loses the sympathy and repels those toward whom he may cherish only kindly feelings. Edward Everett said of Abraham Lincoln, that he was one of the most perfect gentlemen he had ever met. The compliment of

the polished orator recognized that which was better than mere outward manners, for the etiquette of the White House never smoothed out the angularities that days of toil and poverty had wrought into that iron frame. It was the noble heart of Mr. Lincoln that won the encomiums of perfect gentlemen, alike from those whose lives had been spent in palaces and in hovels.

The inner revelations of his social and public life show how wonderful was the tact he possessed. During those days of war persons of every shade of character and position asked for admittance to his presence, and the story of the many-burdened man, forgetting self in his interest for others, has gone into all the world. It is the sort of tact shown in this

grand life that touched every class of men with an intuitive knowledge of their need that is worth a fortune to any one.

There is a selfish tact, a spurious article, that would be all things to all men in order to please them, that may be positively injurious and worthless, as far as the welfare of others is concerned.

While tact is largely a gift of nature, it is susceptible of cultivation by care and education. Men are to be studied. Age, business, social relations, and personal history and peculiarities should be considered. That approach that wins the heart of a child will not answer when you come to those whose heads are gray. Running thoughtlessly against the personal habits and moods of others, leads to the loss of their good-will, and gains only their dislike. Some men change in their feelings very much like the weather, and it is wise to note if the wind be in the east or the west.

Absent-minded persons, all-absorbed in some individual thought or pursuit, are con-

stantly blundering into mistakes in these respects; it requires a keen eye and a warm heart, constantly alive to the interests of others, in order to the use of that tact which always speaks and acts at the right time and in the right way. In business and professional life alike, tact is necessary to success. The most successful clerk in the store is the one who knows how to please and meet the wants of customers of every class. Without tact the lawyer will be sure to lose both his cases and his clients.

The physician, by his manner and words in the sick-room, often heals faster than by the medicines he prescribes. The minister who has a sympathetic heart that touches those who belong to every grade of society, and neither carries his head so high or studies so closely as to get near-sighted, and thus fail to observe small folks and little folks, will win the love of the community and have full congregations, while others, in certain respects more able, will be looking about for a parish.

ROBERT SMITH CANDLISH, D.D.,
THE EMINENT SCOTTISH DIVINE.

IN respect to mental organization the portrait of this eminent representative of Scottish clergymen shows very superior characteristics. The squarely-built head, strong yet well-chiseled features, and massive forehead exhibit the man of great intellectual strength and of resolute and earnest disposition. The successor of Chalmers in the occupancy, for several years, of the pulpit of old St. George's, Edinburg, he has earned a reputation which designates him as worthy to wear the mantle of that distinguished divine; and in the constitution of his brain there is no small resemblance to that Herschel of the Scottish Church. Physical fortitude is seen in that prominent and full chin. Wealth of language combined with symmetry of expression are indicated by the full-orbed eye and rounded perceptives. Logical acumen with rare resources in the way of suggestion,

metaphor, and illustration are shown by the depth of the upper forehead and the breadth of the brain in general forward of the ear.

The hair has a crisp positiveness of its own, according well with the large Firmness and Self-Esteem which it can not altogether conceal. There is also strong Approbativeness, which contributes not a little of the aspirational element to his activities, while well-developed Combativeness renders him courageous and unflinching in the assertion of principle and in the maintenance of his positions. Impatient of constraint and subordination, he is the man to organize and lead a new departure in the sphere of morals and religion by which more freedom of conscience shall be attained.

On the 14th of August, 1834, the Rev. Robert S. Candlish was ordained to the charge of St. George's Church, Edinburg,

Scotland, in which wealthy and influential congregation the efficient ministrations of the new pastor met with a cordial and admiring acceptance.

He threw himself with great zeal and energy on the popular side in the controversy of the period, in which the General Assembly

one of the foremost among the Evangelical leaders.

When the disruption occurred, Dr. Candlish had, for nearly ten years, preached in the stately structure of St. George's as a minister of the Scottish establishment. In a very different edifice—a brick church which had been



of the Church of Scotland passed the celebrated Veto Act, known as "The Ten Years' Conflict," and which issued in the memorable disruption of 1843.

It was not, however, until 1839 that he took a part in the General Assembly. His extraordinary talents in debate made him

hurriedly run up on the Castle Terrace—he preached, on the Sabbath of May 21, 1843, his first sermon as a minister of the Free Church. Here for eighteen months his congregation assembled, until the erection of another and a more suitable place of worship in the Loth-
erian Road.

The church then built was afterward demolished to make way for the new station of the Caledonian Railway Company. The more splendid and commodious edifice raised in Shandwick Place, at a cost, including site, of about \$150,000, was opened for divine service on the 24th of October, 1869.

To detail the varied labors of Dr. Candlish in connection with the Free Church would be to sketch the history of that community from its origin to the present day. Since the death of Dr. Chalmers he has been its recognized leader; and in the questions affecting its interests and progress he has taken a prominent and distinguished part. He has also been an active co-operator in the great public religious movements of the times, as, for example, in establishing the Evangelical Alliance. On him devolved the task of submitting and explaining the report of the committee on the basis of union to the Conference, at Liverpool, in 1845; and at the meeting held at Birmingham in April, 1846, he submitted a resolution that no invitation to join the Alliance should be issued to those who held their fellow-men as slaves. More recently he directed his influence and eloquence toward the accomplishment of a union between the Free Church and the other non-established Presbyterian bodies of Scotland. Very cordial and affectionate were the relations which existed between Dr. Chalmers and Dr. Candlish; and at the meeting of the General Assembly in 1846, Dr. Chalmers said, pointing his finger toward him, "There goes a very remarkable man—a very great and good man—Scotland could not do without him." The sudden death of Dr. Chalmers, in 1847, rendered vacant the office of Principal of the New College; to this office Dr. Cunningham was appointed, and Dr. Candlish was chosen to fill the chair of Divinity. Eventually, however, with the concurrence of the church, he resigned his professorship, and continued to minister to his attached flock.

Powerful as a preacher, Dr. Candlish is not less effective as a debater in the church courts, where, indeed, he stands unrivaled. In a series of sketches of the eminent members of the General Assembly of the Church of Scotland of the year 1841, after describing Dr. Chalmers, Hugh Miller graphically sketches the subject of our notice. A sen-

tence or two we may quote: "A man fitted for every walk of literature, whether power or eloquence of intellect, just taste or nice discrimination, be the qualities required.

"He has risen to address the Assembly, and a general 'Hush!' runs along the galleries like that which greeted the speaker previously described. The voice was clear and well modulated, the action simple. The arm was stretched out at an angle raised a very little above the horizontal; but as the speaker warms the angle rises. Mark, first, the wonderful flow of language! Of all the members of the Assembly that member has, perhaps, the readiest command of English, and his spoken style the most nearly approaches a written one."

The publications to which the name of Dr. Candlish is attached are very considerable in number. Some of these our remaining space will only allow us to notice briefly. The first volume of "Contributions toward the Exposition of the Book of Genesis" appeared in 1843, and not until the lapse of twenty years was the work complete. A new edition, in two volumes, has recently been published. In 1846 were issued four letters of a controversial character, addressed to the Rev. E. B. Elliott, on some passages in his "Horræ Apocalyptice." The important work on "The Atonement: its Reality and Extent," originated in letters explanatory of statements made on the occasion of the Edinburgh commemoration of the Westminster Assembly, in the autumn of 1843.

These letters were published separately in May, 1845, and a second edition appeared in the following month. The volume entitled "Scripture Characters and Miscellanies" was published in 1850. "Life in a Risen Saviour," being lectures on the Fifteenth Chapter of 1st Corinthians, appeared in 1858, and a second and carefully revised edition in 1863. "The Two Great Commandments" illustrated in a series of discourses on the Twelfth Chapter of the Epistle to the Romans, appeared in 1860. It is the aim of the volume to show how thoroughly the ethics of the Gospel are impregnated with the spirit of its theology.

It has been announced in some of the religious papers that Dr. Candlish intends visiting America in the course of the present

year, and his coming is awaited with considerable interest by all who take an active part in religious matters.

A STRANGE CONVERSATION.

WHILE sitting in the office of the National Temperance Publication House the other afternoon, waiting for a friend who was purchasing books in the store, I was greatly astonished by the following conversation between the Agent and his assistant. The former had a large pile of letters, just received from all parts of the country, and the lady was assorting tracts.

Agent. Did you send the Rev. T. Jones "Our National Curse?"

Assistant. No; he writes that it is not sufficiently strong. He wishes a thousand "Cholera Conductors" to distribute among his congregation. He also wants "Gin Toddy" for his Sabbath School, and says he does not think much of "Temperance in Sunday Schools," but likes "Drunkenness and Christian Love" better.

Agent. Well, let him have what he wants, but send a "Word in Season" at the same time.

Assistant. I find we are out of "Sympathy for the Drunkard," and have more "Liquor Sins" than we ought to have.

Agent. Yes, and we must get rid of them as soon as possible, and also the "Effects of Alcohol upon the Human System." Here is a letter from Mrs. Smith, in which she complains that you have sent her the "Deacon and his Dog" instead of "Our Young Minister," and says also that she does not like "Our Stumbling Brother."

Assistant. She is certainly very particular; she wrote for "Somebody's Son," and I must have been careless in sending—

Agent. The Rev. B. Thomson writes, "I have read the 'Wife's Secret,' and, in consequence, have given one of my deacons the 'Fatal Draught,' and wish I had fifty more 'Ready to Perish.'" He also states that "His Personal Honor" was damaged in transit, and asks for some more.

Assistant. Well, we have none to spare in the office; I think the "Philosophy of Drinking" would suit him better.

Agent. Dr. Lurewell says that he believes the "Wine Cup and the Gallows" will convert more sinners in a month than he can with a year's preaching; and as each of his congrega-

tion has "Natural and Reserved Rights," he hopes they will each get "Gled's Grip," which he thinks would do them good.

Assistant. I think if he would recommend "Temperance and the Bible" to his church, it would be in a better state.

Agent. I have written him and recommended a "Rum Fiend" for each pew,—they would just suit his congregation.

Assistant. Miss Sweet says she wants the "Best Fellow in the World," and that she will let her sister have the "Temperance Doctor." I wrote her that she should have more "Self-Denial;" but she says she likes "Liberty and Love" better, and will take "Nobody's Advice."

Agent. The Hon. R. Harris says that an "Honest Doctor" has never been seen in that part of the country, and does not know anything about "Who Killed the Man." He also states that the expressman lost "Little Lizzie" on the road, and wants "William and Mary" instead.

Assistant. The Rev. P. Jenkins says he found a "Mocking Genius" in his pulpit and a "Blasted Tree" in each pew, and that his people like them better than the "Ox Sermon" which he gave them the Sunday before.

Agent. The Rev. Fiddle, D.D., sends for 1,000 "Freemen or Slaves" to put one in each cell of their Penitentiary; he says, further, "I have on hand a few 'Rescued Brands,' which I intend hanging up in the horse-cars to let people know that my church is not quite asleep."

Assistant. Did you send "Timothy a Teetotaler" to the poor house?

Agent. Yes; and now we will send a "Shot at the Decanter" and close for the day.

Now, I knew my friend the Agent to be one of the best temperance men in the world, and also one of the most energetic and successful of Sunday School workers. I also knew the lady assistant to be a thorough-going Christian and true temperance girl, so you can imagine my relief when I found that they had not gone raving mad, but were simply filling orders for tracts, and that the quoted words were the names of those ordered, and that instead of wishing and sending all sorts of evil, they were helping to spread light and knowledge on the great question of Temperance.

EDWARD CARSWELL.

A BEAUTIFUL WOMAN.—The perceptive faculties of women are usually keener than the same phrenological organs in men. Wom

en know that beauty rather than genius is worshiped by the sterner sex. A man may talk of the latter to his lady-love, but the keenness of the woman knows that he is thinking of the former. Women are fond of admiration; hence one of their longings is to be beautiful. The grand secret of female beauty is health, the power to eat, digest, and assimilate a proper quantity of wholesome food. Take exercise in the open air, subsist on plain and simple food; use

no stimulants; sleep regularly and plentifully; and observe the laws of life and health in all respects. This will cleanse the stomach, tone the vital organs, give good digestion, purify the blood, clear up the complexion, and produce a state of mental and physical elasticity which gives symmetry of form, bright eyes, a healthy skin, glossy hair and a genuine type of female loveliness, which no cosmetic can produce. [A quack's patent medicine advertisement slightly altered.]

AMY'S IDEAL.

BY BERTHA H. ELLSWORTH.

AMY, country born and bred,
An ideal lover
Dreamed of, who would woo and wed
When he should discover
That within her home, his mate
Anxiously did watch and wait
For the coming of her fate.

Handsome, high-born, gifted, kind;
Covered, too, with glory;
Such a hero as we find
In sensation story.
For this hero to appear
Amy waited, year by year;
Nor of other love would hear.

Rustic lovers sued in vain:
Scorning their advances,
Amy met with cold disdain
Ned or Harry's glances.
Dreaming still of lords and kings,
Silken robes and diamond rings,
She despised all humble things.

But time, fading Amy's face,
Brought no lords' addresses;
Wrinkles took the rose's place;
Gray hairs streaked her tresses;
But her morbid fancy, fed
By the novels she had read,
Still with romance filled her head.

Loth to own she was less fair,
To conceal time's traces,
She assumed a youthful air,
Apling girlish graces.
Fretful grown, she fretted still
Of the station she might fill,
Did the world not use her ill.

She was laughed at; liked by none;
And though dull at learning,
That she reaped as she had sown,
Felt a woman's yearning
To be loved; and as she grew
Older, wondered oft why few
Welcomed her, of those she knew.

Ah, poor Amy! 'lone and old!
She, in search of her ideal,
Looked for glitter and not gold,
Else she might have found it real.
Never could she understand,
Noblemen could be as grand
When stamped such by Nature's hand.

But 'twere better had she found,
While still young and charming,
That earth's kings are not all crowned;
Some may follow farming!
Royal natures need no throne:
And had Amy this truth known,
Would she be unloved and 'lone?

HOW I LEARNED SELF-RELIANCE.

IT always seems to us old men as if the boys of the present day did not have half as hard a time as we boys of the past generation had, and as if the lessons of life which we learned in roughness and toil and suffering, you boys of to-day were either not learning at all or learning with kid gloves on; or walking in paths of ease and comfort. Most of us learned self-reliance in a hard school. This quality of self-reliance is one that every boy should possess, but

which he can hardly obtain unless he is tried and made to rely upon himself. A man without self-reliance is a poor stick, and to avoid being a poor stick of a man, he should learn the lesson while he is a boy. I say there is nothing like teaching a boy to depend upon himself. That's the way I learned to swim. I tried for weeks to learn in shallow water, but never had confidence enough in myself to strike out and really try. At last, one day as I was ducking around near the shore, that

horrible monster known as a "big brother" took me on the deck of a schooner near by, and threw me over the outside rail in deep water, and told me to swim for my life—and I did. I struck out for very terror, and to my astonishment I saved myself, and from that moment I was never afraid of the water and could swim well. That rude, rash treatment of my brother's gave me the self-reliance which I so much needed. I was early

taught in other things to rely upon myself, and I now have reason to be thankful for it. *Christian Review.*

HON. PETER C. BROOKS, of Boston, who left one of the largest fortunes ever amassed in this country, on being asked what rule he would recommend to a young man as most likely to secure success, answered: "Let him mind his own business."

Physiognomy, or Signs of Character.

Of the soul, the body form doth take,
For soul is form, and doth the body make.—*Spenser.*

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONTINUED FROM OUR MARCH NUMBER.]

THE CHARACTERISTIC FORMS OF THE LOWER ANIMALS.

NOTWITHSTANDING the high authorities in favor of the facial line, we have ventured to say that it is not adapted to give a measure of the capacity or area of the head in contrast with the face, in brutes; because the peculiarities of face in them depend on their instincts and propensities. These are for the most part indicated by the greater development of some one or more of the organs common to them all, and the subserviency of others, not by the mass of the brain. The head of the horse presents us with an example; it is an herbivorous or graminivorous animal, and hence the peculiarities of its teeth. Now, it is in accordance with the teeth that the whole character of its form is derived. The incisor teeth or nippers project, that the head may reach the ground for feeding; and they have a peculiar structure, that they may be preserved sharp. The lips also conform to this object; they are not only suited to cover the teeth, but to project and gather the food. Again: the grinders are large, strong, deeply socketed, and adapted to bear the trituration of the food for a term of years corresponding to the natural life of the animal. While the mouth is small, the head is long; and the muscles which operate on the lower jaw, to close it, and to give it the lat-

eral motions necessary for grinding, are proportionably large; therefore the depth of the head behind, and the length and narrowness forward, are the principal characteristics of the horse.*

Another peculiarity of the horse's head is seen in the construction of his nostril. He



FIG. 1.—HEAD OF A HORSE.

does not breathe through the mouth, but only through the nose. Here is an interesting relation of parts, which, though remote in place, are united in function. The nostril

* Cuvier has been at the pains of measuring the facial line in a great variety of animals, beginning with the orang-outang and ending with the horse. Let us take the pug-dog, in which the angle is fixed at 35°, and compare

is indicative of the state of the lungs; and a large dilatable nostril has descended from the Arabian breed, and marks the capacity of "wind." [Large nostrils indicate large lungs.]



FIG. 2.—HEAD OF A DEER.

It is agreeable to see the young kid in the first hours of existence, impelled by its instincts to mount the cliffs and summits of the hills; or to behold the goat perched high on the scarped rock, his beard tossed by the wind, and browsing fearlessly. These animals, the sheep, and horned cattle generally, congregate, and make a circle to oppose an enemy, and present for their defense a combined front. Their eyes are placed differently from those of the horse; and the nostril wants the expansion necessary for maintaining a



FIG. 3.—HEAD OF A GIRAFFE.

continued flight. The most curious adaptation of the form of an herbivorous animal to

it with the horse at 23°; who will not perceive that the difference of the facial angles depends on the extension of the jaws of the horse, necessarily arising from the form and number of the teeth, or, in other words, from his mode of feeding?

its mode of feeding is seen in the giraffe. The whole frame of the creature is formed with the view of enabling it to reach its food, which is not the herbage, but the leaves of trees. The skull is small, and so light, even in comparison with that of the horse, that it is like a thing of paper; and the tongue and the lips protrude, to catch the branches overhead. The large, prominent eyes, and the limbs formed for flight, betoken the timidity of the creature.

If we compare a carnivorous animal, as the lion, with a horned animal, as the bull, it will be readily perceived that it is from the teeth or the horns that the whole character of the head results. The peculiarity of the skull of the lion, or the tiger, consists chiefly in the breadth of the face, caused by the large zygomatic processes, which are formed



FIG. 4.—HEAD OF A FOX.

of great size to give room to the strong muscles that close the jaw; and it is visible also in the shortness of the muzzle, and the depth of the face in front, where the canine teeth are situated; for these must be deeply socketed in the jaws to sustain the strength of the fangs, and the powerful efforts of the animal. The grinding teeth are small, and formed so as to cut like scissors; for there is here no lateral play of the jaws, as in grinding; the canine teeth overlapping and preventing that motion. The muscles which

Veterinary surgeons and naturalists have found it difficult to assign a use for certain cavities at the back part of the horse's head called the Eustachian cells. To me they do not appear to be subservient either to neighing or to the organ of hearing, as supposed; but they are placed in this situation, and filled with air, to occupy the large space intervening between the sides of the jaws, without materially increasing the weight. All jockeys know the defect in a horse of a heavy head and long neck.

close the jaws are of tremendous power, commensurate with the length and strength of those fangs, which are for holding or tearing the prey.



FIG. 5.—HEAD OF A LION.

See, again, the head of the boar, how all the parts hang, as it were, together, to produce its characteristic form: the snout and the great tusks are for grubbing up roots; yet, from his strength, he is a formidable animal, for he will turn and rend. This very term implies a great deal; he does not tear with his teeth, he does not *butt*, as with horns; but he runs straight forward, and with his projecting lateral tusks plows up the flesh. The whole strength of his body and neck is concentrated to the use of these for-



FIG. 6.—HEAD OF A TIGER.

midable instruments. Look to the antique boar of the Florentine Gallery. The head rises high and projects behind, to give strong attachment to the powerful muscles constituting his very peculiarly shaped neck, which is large, thick, inflexible, and suited, when

he rushes forward, to convey the impulse to the head, and finally to the tusks.*

It ought to be a pleasing study to the artist to found his designs on an accurate knowledge of the structure and functions of animals. This pursuit unites his art with the liberal sciences of the naturalist and the comparative anatomist. And if he be a lover of the antique, he must have observed that, in the better ages of the arts, the sculptors were remarkable for giving a true and natural character in their representations of brutes. The knowledge of animal form is the only guide to the right conception of the perfection and beauty of the antique.

FURTHER ILLUSTRATIONS OF THE PRINCIPLE, THAT BEAUTY IN THE HUMAN FORM HAS RELATION TO THE CHARACTERISTIC ORGANS OF MAN.

What, then, gives nobleness and grace to the human figure, and how is deformity to be avoided? In the statues of antiquity we see that the artists had a perfect knowledge of the frame, and could represent it in all its natural beauty. But in many of these remains there is something beyond an exact copy of nature,—something which, as we have seen, has been called *divine*. Now the difficulty of explaining why such deviations from real nature should inspire us with admiration, has forced inquirers into vague surmises and comparisons. For example, they have applied the principles of harmony in music to the beauty of the human figure.

When the animal frame is surveyed as a whole, or as composed of parts more or less common to all living creatures, which is taking the philosophical view of the subject, a uniform plan is seen to pervade the animal kingdom. Not only may the skeleton be traced from a shell up to the complex mechanism in man,† but every organ or individual part, when viewed comparatively, will be found to undergo a similar development; from the simple structure of those creatures which enjoy the lowest kind of sensibility, to that which exists in the human frame. If,

* Bridgewater Treatise on the Human Hand, 4th edition, p. 400.

† See the author's "Bridgewater Treatise on the Human Hand," which may be taken as an introduction to the present subject.

according to this view, we examine the head, and follow the course of development of the brain, as the part which occupies the cranium, and then that of the organs of the senses, which together constitute the face, and include the apparatus of speech, we shall distinguish what is peculiar to man. We shall learn what forms of parts bear relation to those endowments by which he holds his acknowledged superiority; and the conclusion may be arrived at, that by magnifying, in works of art, what is peculiarly characteristic of man, we may ennoble his countenance, and, without being strictly natural, attain what is better.

No faculties of the mind have been bestowed without the field for their exercise; men's capacities, their thoughts, and their affections, have their counterparts, or objects, to excite or to gratify them. There are beings superior to ourselves, and in a condition of existence different from ourselves, and the mind delights in contemplating them. Even in our enjoyment of beautiful objects, our thoughts rise beyond them. We walk into the country, in the woods and wilds, in love with nature and delighting in solitude. But if we examine our minds, we shall find that we people these solitudes; however we may believe that it is nature and inanimate creation



FIG. 7.—HEAD OF APOLLO.

which please us, all is referable to, and concentrates in, some reflection of the voice and features of human kindred.

In admiring the finer works of antiquity,

it is admitted that the forms which we regard as models of perfection are unlike what has existed in nature: that no living head ever had the facial line of the Jupiter, the Apollo, the Mercury, or the Venus. Having found reasons to reject the theory of Camper, the question returns, How is that beautiful which is not natural?

* Let us take the head of Mercury, which is simply beautiful, and the head of a satyr, both antique; and contemplate them in succession. In the Mercury, there is a combination of forms and general proportions of the head and face never seen in all the varieties of living man; yet is the whole and each particular feature perfectly beautiful. In turning to the satyr, we find every proportion reversed; the forehead narrow and depressed; the eyes near, small, and a little oblique; the nose flattened to the upper lip; the mouth protuberant; the ears large, tipped, and sharp; and the expression of the whole goatish and savage; and what there is of human expression is lively and humorous, but common and base. Now the principle which has been followed in giving beauty to the head of Mercury is obvious here. Whatever is peculiar to the human countenance, as distinguishing it from the brute, is enhanced. Not only is the forehead expanded and projecting, and the facial line more perpendicular, but every feature is modeled on the same principle: the ear is small and round; the nostril is eminently human, and unlike that of the beast; the mouth, the teeth, and lips, are not such as belong to the brute, nor are they the mere instruments of mastication, but of speech and human expression. So of every part, take them individually, or as a whole; whatever would lead to the resemblance of the brute is omitted or diminished.

The principle is further extended. It is not in the proportions between the face and the brain-case alone that the contrast is perceived, but in the quality or function of each organ. We have adverted to the theory of Cuvier, that as hunger and the animal passions govern brutes, and as the parts which chiefly minister to them in the face are the organs of smell and of taste, the unusual development of the nose and the mouth degrades or brutifies the human countenance

But we remarked, in regard to this, that the nose is not elevated in man, to increase the organ of smelling; it belongs to the voice, to human voice and speech. And so must we consider the different functions of the mouth. In brutes, it is for prehension, tearing, and mastication; in man, its more distinguishable office is speech and expression. Model the lips for this, for eloquence and the expression of the softer passions, and it becomes beautiful; extend the teeth, and make the lips a mere covering for them, and it is brutal, at variance with human physiognomy, and detracting from whatever is agreeable in the face.

Our principle will apply with equal force to the motions of the face as to the permanent form. Human sentiments prevailing in the expression of a face will always make it agreeable or lovely. Expression is even of more consequence than shape: it will light up features otherwise heavy; it will make us forget all but the quality of the mind. As the natural tones of the voice are understood and felt by all, so it is with the movements of the countenance: on these we are continually intent, and the mind ever insensibly exercised.

Whether the views which I have here advocated were ever announced by the ancients I know not. But I think it is abundantly evident that their artists acted upon them. They went beyond mere imitation. They advanced to a higher study, that of combining excellences; selecting what was indicative of the higher and purer qualities, impassioned thought, and this they exaggerated. Their divinities were of human mold; but still, as not visibly present, they were creations of their imagination.*

* In high art, it appears to have been the rule of the sculptor to divest the form of expression. In the Apollo, there is such a stillness of features, that every one follows his fancy, and thinks he sees in the statue what is really in his own mind. In the Venus, the form is exquisite and the face perfect, but there is no expression there; it has no human softness, nothing to love. Mrs. — saw a young gentleman, she thinks an American, kissing the tips of his fingers to the statue, as he left the Tribune (the apartment dedicated to the goddess), but for this the statue gives no license; it would not have been unbecoming had he so saluted the Melpomene, for there we see the loveliness which lurks in expression. The authorship of an agreeable work on Rome is disturbed because "she has seen women, real living women, almost as beautiful as the Venus, and far more interesting."

The explanation which I offer differs from what is commonly given by writers on art. They call the "ideal head" that which does not represent individual beauty, but collective beauties, a selection and adaptation of beautiful parts taken from a variety of individuals, and combined in one representation.* I place the superiority of the antique on higher ground, on the more extended study of nature, of brutes as well as of man.

That the true animal character was fully understood by the ancient artists there is sufficient proof. Is there anything finer than the wolf of the Capitol, or the antique boar, or the dogs in the entrance of the Florentine Gallery, or the horses of the Elgin marbles? It was this study of pure nature that enabled them to undertake such compositions of surprising beauty, as we see in their Fauns, Satyrs, Centaurs, and masks, where the peculiarities of brutes are engrafted on the human form. And it may be remarked that they did not merely give to their sylvan deities hair and cloven feet; they bestowed on them a certain consistency of character very difficult of execution, but necessary to reconcile the eye to the absurdity; a goatish expression of countenance, or a merry festive air, all in conformity with the hair and the hoofs, their embrowned skin, and the savage wildness of their life.†

We should find more of her way of thinking if all would confess their first impressions. This, however, can not detract from the perfection of a statue which has been admired in all times, as now. It only points to the parity of the design, the high aim of the artist, and his successful execution. Had the Helen of Zeuxis been preserved, I can imagine that it would have been of a more feminine and seducing beauty than the Venus. But we must bear in mind that which I have taken notice of in the text, that all individuality was studiously avoided by the ancient sculptors in the representation of divinity; they maintained the beauty of form and proportion, but without expression, which, in their system, belonged exclusively to humanity.

* "Nous dirons donc, que la combinaison des parties peut former un tout, est ce qu'on appelle l'idéal."—WINCKELMAN.

† The difficulty of giving these combinations of the human and brute character is shown in the attempts of modern artists to imitate the ancients in their representations of Fauns and sylvan boys. They do not seem to know how to knit their joints, and their faces are too sober and wise.

"*faber imus et ungues
Exprimet, et molles imitabitur are capillos,
Infelix operis summa, quia ponere totum
Nesciet.*"

What, then, was more natural or obvious, in studying the effect of these forms and characters when transferred to the human countenance, than that the artist should perceive that the proportions which distinguish them should be avoided, or even reversed, in representing the dignified and characteristic form of man.

Winckelman would make it appear that the artists of Greece studied the forms of the lower animals for a different purpose: to join the character of the brute with that of man, in order to embellish him, and to bestow on him new and preternatural properties. And he refers to the heads of Jupiter and of Hercules as instances. "In the former," he says, "we may discover the great eyes, and imposing front, and the mane of the lion; and in the latter, the head and neck of the bull."

I must entertain doubts of this theory, and of the effect of the excessive exaggeration; in the head of Jupiter I have not felt its influence. But, if the theory be true, it goes to establish the fact, that the artists studied the form of brutes in comparison with that of man; and I hold it to be an inevitable consequence of such a comparison, that they should discover that the perfection of the human form was to be attained by avoiding what was characteristic of the inferior animals, and increasing the proportions of those features which belong to man.

I shall not deny ingenuity to the theory of Hogarth, or usefulness to that proposed by Sir Joshua Reynolds. But there is danger to the modern artist, if he is led to conceive that he can bestow beauty by following some fancied curve or gradation of outline. Sir Joshua held that beauty is the medium, or center, of the various forms of individuals; that every species of animals has a fixed and determinate form, toward which nature is continually inclining, like lines terminating in a center, or pendulums vibrating in different directions over a single point: as all these lines cut the center, while only one passes through any other point, so he conceived that perfect beauty is oftener produced than any one kind of deformity. This ingenious idea is well suited to the portrait painter, who will not be a favorite unless he knows how to soften the features and preserve the likeness. But there is this fatal

objection to it: that, as in the antique, the artists deviated from nature, the pendulum would never reach the center.

It is happy for philosophy, science, history, poetry, and eloquence that the Greeks were a superior people, and happy for our subject that they were an eminently beautiful people. The artists of Greece certainly did not follow a vague line of beauty. They rather imitated some acknowledged beautiful form of age or sex. They even combined the beauty of both sexes, as in the young Bacchus, or more decidedly in the Hermaphrodite.

With them, the highest effort of art was to represent man deified; as it were, purified from the grosser characters of nature. This they did, as we have already seen, by exaggerating whatever is proper to the human form; by increasing what gives dignity, and bestowing features, capable and prone to the expression of the finer emotions; representing them either as still and imperturbed, or as indicating a superiority to the things of this lower world.

In painting, the representation of the Deity is always a distressing failure. If to represent Him who "became man," and "dwelt among us," be the highest effort of art, how is the Creator to be represented? Michael Angelo painted the Deity boldly, and with the expression of the indignant wrath of man. Raphael represents the Creator plunging into chaos* and separating the elements. But on viewing these paintings, we are brought to feel the insufficiency of the art, and to think of the artist to the exclusion of all sublime contemplations which the subject should inspire. Yet it is foolish to call such attempts impiety, since no other idea is presented than that which is inculcated from our infancy. Our expressions in words are at variance with our just conception of Divine Intelligence, and our tongue as imperfect as the pencil of the painter. The one solitary expression in the Scriptures descriptive of the person of God, is studiously obscure, and the accompaniments of His presence, not the countenance of the Almighty, are described.

The sentiments of Plato, Cicero, and Seneca are brought to bear on this subject of beauty and ideal perfection. Yet it is fortu-

* In the Gallery of Raphael, in the Vatican.

nate that we have the works of the ancient sculptors before us, to preserve us from the influence of vague theories. Cicero has given us his conception of a perfect orator. "And such an ideal person," he says, "may be the object of imitation; but those who imitate can only approach the model according to the talents which nature has given them. No man can possess all the qualities, or attain to the whole perfection of the model; he must in some one respect be deficient. His knowledge and capacity of research, his acquaintance with human character, his insinuating or commanding language, or his eloquent appeal to the heart, his countenance and expression, his voice, manner, gesture, can not be all equally balanced so as to constitute the perfect orator." And he illustrates his position by the example of Phidias who, when he made the statues of Jupiter and Minerva, took no individual for his model, but had an idea of perfection in his own mind.*

Here I conceive is the source and the authority for all which has been written on this view of the subject. The great artist had formed a conception of beauty: the question perpetually returns, By what studies, by what theory, had he attained this? The perplexity appears to me to proceed from a distinction being made between the pleasures of the mind, and those addressed to the senses. Plautus says that the poet seeks what nowhere exists, and yet finds it.

* "In the following quotation, Brutus has asked Cicero what constitutes excellence in oratory. He answers, that no man has been perfect: that there is an ideal perfection which we should attempt to attain, nor resign the effort because to accomplish all is impossible: just as there is nothing beautiful which may not in imagination be surpassed:

"Sed ego sic statuo, nihil esse in ullo genere tam pulchrum, quo non pulchrius id sit, unde illud, ut ex ore aliquo, quasi imago, exprimatur, quod neque oculis, neque auribus, neque ullo sensu percipi potest; cogitatione tantum et mente complectimur. Itaque Phidias simulacris, quibus nihil in illo genere perfectius videmus, et his picturis, quas nominavi, cogitare tamen possumus pulchriora. Nec vero ille artifex, cum faceret Jovis formam, aut Minervæ, contemplabatur aliquem, e quo similitudinem duceret: sed ipse in mente insidebat species pulchritudinis eximia quædam, quam intuens, in eaque defixus, ad illius similitudinem artem et manum dirigebat. Ut dicitur in formis et figuris est aliquid perfectum et excellens, cujus ad cogitatem speciem imitando referuntur ea quæ sub oculis ipsa cadunt: sic perfectæ eloquentiæ speciem animo videmus, effigiem auribus querimus."—*Cicero de Oratore*, cap. 2.

His genius supplies it,—it is in his mind. The novelist who has genius to catch and to represent the feelings of men, and their motives to action, may give a truer picture of his period than the historian, even although he describes what never existed. That is to say, the incidents, the passions, the prejudices, which he describes, may never have been combined as he combines them; but they are to nature, and to the state of society in which he lives, and are, therefore, a record of the time. But this is not the rationale of the ideal in painting.

Or we may illustrate this in another manner. When Zeuxis was employed on his Helen, five of the most beautiful women were before him, from whom he composed his perfect beauty. But it was not the object of the artist here to produce ideal beauty, or to give that repose of sentiment which is the effect of contemplating the Medicean Venus; his aim was to represent a beautiful and seductive woman, whose charms were to lead men to extravagance. And why have not painters with the same means attained to the same perfection? It has been answered, Because they have not had the same genius. On which M. Quatremere De Quincy observes, "What, then, is a model, if genius be still necessary in order to imitate it? Who shall tell whether it is the model that causes genius to see the image of beauty; or, genius that sees its own idea in the model."*

There has been another theory advanced, that, in the antique statue there is presented to us the grandeur of form and the proportions of man, as he originally proceeded from the Creator, such as he was designed to be before he was subjected to labor, poverty, and sickness.

But in the early times of all people, their gods have been represented by the trunks of trees, or pillars rudely carved; and, when improved, it has been by imitating the hu-

* The same author thus expresses himself: "In this we have the enigmas of Plautus solved; in every art, whatever comes within the scope of the understanding, of sentiment, and of genius, does not really exist anywhere; has neither substance nor place, and is subjected to no one of the senses, while he who finds it is unable to point out where he has seen the model of it."

This is language which puffs up the young artist to inordinate conceit; and, instead of studying, sets him a dreaming of something for which he is to be beholden to his innate genius.

man form with simplicity. At first, the head was carved as on a pedestal; then the neck, breast, and shoulders, and the indication of sex; then the arms and the extremities were imperfectly blocked out, until, at length, and after ages had passed, the members were displayed free, and the figure perfected in manly beauty.

I shall once more endeavor to analyze that process of thought by which, out of the contemplation of nature, ideal perfection is derived. The idea of the divine form in the mind of any man, whatever may be his genius, has been acquired, and is of human origin; and the attempts of all painters and sculptors to embody the idea in their works evince that such is the case. That a man of genius has an idea of perfection can not be the result of pure imagination. Whatever conceptions he may entertain must have been acquired; and the question returns, How? Let us suppose a painter to have before him the three Graces; their perfections are not the same; for to have full influence on the heart, we know that, however beautiful, each must be individual; that the form, the attitude, and the expression must be varied, or the interest and grace are injured. The attempt of the painter to combine what is beautiful in each, into one more perfect, would, in my opinion, fail; nature would be lost, and the whole prove inconsistent. At all events, the combination of individual human beauty, however made, and with whatever exercise of genius contrived, would not produce what is aimed at,—ideal beauty, as exhibited in the remains of antiquity; a form which we acknowledge to be beautiful, but which has had no existence in life or in models.

With the view of attaining beauty, the artist is not to slight nature or to avoid it, but to study it deeply, as the only source of improvement. He must not only contemplate those beauties which we may suppose to stand before him, but consider where they differ from others less admirable. How beautiful that smile! How eloquent those lips! Let him ask himself in what this consists. Smiling and speech are characteristic of man, and are bestowed to express the affections of the heart, and communicate thought. Give to the mouth the capacity for these. Ob-

serve the forehead, and the defined eyebrow; what is there in nature superior? Let him mark them, and then raise and throw forward the forehead, a feature especially human, and elevating to the countenance. Now he sees that depth is given to the eye; that the shadows fall with bold relief, the eyebrow acquires more freedom, stands in a finer arch, and is more expressive of agreeable emotions. And thus he passes from point to point; from one feature to another,—the nose, the ear; exaggerating a little the outline of whatever indicates the higher and purer qualities, and avoiding what is low, or whatever is associated with the baser human passions or with the form of the brutes; and by insensible gradations, and long contemplation of what is highest and best, he acquires, and from nature, that idea which is, in his mind, the perfection of form.

Supposing that a painter so tutored is set with his fellows to copy a model; by his knowledge of what constitutes humanity in its most perfect condition, and of what is indicative of human sentiment, he is enabled to elevate his design; and then it is acknowledged that, while he has preserved the likeness, he has refined it, and has introduced something of the purity of the antique.

Although I have taken the form of the head and the features for illustration, the principle is applicable to the whole figure. In comparing the finer forms of antique statues with those of the *Athletæ*, *Lapithæ*, and *Fauns*, down to the brutes, we see that the grace, the repose, and the nobler attitudes of the human body, are preserved in the former, to the exclusion of whatever belongs to individual character, or partakes by association of what is mean in condition.

The *Satyr* and *Faun* are as mules and hybrids; the man and the brute are joined; sometimes with the horns and the hoofs, —sometimes with nothing more distinctive than the tail; and the conception is fulfilled by the grossness of form, the muscular development, and the proportions indicative of activity. But there is neither freedom nor grace of movement in the position of the body or limbs, nor in their proportions or contour. In short, we have the *Apollo* and *Marayas* exhibiting a perfect contrast, and showing that which was characteristic in the one reversed in the other.

[TO BE CONTINUED.]

Department of Physiology—Our Sanitarium.

The truths of Physiology should be inculcated and enforced early and earnestly, and with the emphasis of high religious duty.—Yousmans.

RESPIRATION AND THE RESPIRATORY APPARATUS.

BY M. M. W., M.D.

WHILE our existence is limited to this earth, it becomes a matter of very great importance that we so understand and appreciate our relations to external conditions, that we maintain the highest degree of comfort, and approach the nearest degree of perfection for our bodies. This constitutes health, and disease is the deviations therefrom. When we consider the structure of our bodies, and the plan upon which the various functions are performed, we can not but be filled with gratitude to the Great Creator for the simplicity of the mechanism and the perfect adaptation of all the parts to the purposes of daily life. And while the study of "Anatomy" and "Physiology" in their relations to the "Practice of Medicine," may require long and close application, it is not difficult to comprehend the main features of our physical economy. It would be unreasonable to suppose that an all-wise and benevolent Creator would make a creature subject to fixed conditions, and then give him neither instinctive nor intelligent perceptions of such conditions. Many persons accept an impaired condition as a *natural* one, and *perfect health* as the exception. But what an imputation upon Divine Goodness! If "not a sparrow fall eth to the ground" without His notice, think ye He provideth not in all tenderness for these human bodies that He hath so highly honored as to Himself dwell therein? And is it likely that He would endow only the inferior, subservient brute with perfect health of body, while the crowning jewel of His earthly diadem, human intellect, would be enshrined in a fragile, worthless casket?

There can be but one view to take of diseased conditions: that they are direct punishments for violated laws. These violations may be sins of ignorance, because light has not yet been shed upon the intelligence; they may be sins of commission so long indulged that debility of purpose attends debility of frame, and prevents reformation; they may be sins committed in direct opposition to known and acknowledged laws, but which still confer the sweetness of "forbidden fruit," and so entail

misery and suffering from generation to generation.

It is a lamentable fact that the present generation has more ailments and more enervated bodies than were recognized in former years; and our modern cemeteries hold more short graves than did the old-time graveyard on the hillside. There must be something wrong—radically wrong—somewhere; and it behooves us all, but specially the matrons and mothers of our land, to inquire into the matter, and discover what is necessary for the recovery of our failing energies.

Wherever manners, customs, habits, or fashions conflict with the proper functions of the vital organism, they are antagonistic to life itself; and as such should be combated by the wisest measures known. If we can present the relations sustained to external conditions in a rational and impressive manner, we may hope for good; but, though we may deal with organic violations in a wholesale manner, theoretically, each individual must religiously examine himself for the guilt of commission, and as earnestly make single effort for reform. Let us consider some of the agencies distributed so bountifully about us for the support of life, and the utter disregard manifested of and for the same.

Prominent among these we may consider *air*; that invisible, yet all-permeating fluid that has power within itself to crush these frail bodies to very dust, or, in its zephyr gentleness, to lull the pain of an aching brow, or lift the tiniest petal to its invigorating influence.

The necessity for an abundant supply of pure air is one of the most important requirements of the animal economy. Inaction of the respiratory apparatus, for only a brief moment, would give death full control of the organism; and he is ever watchful to take advantage of the opportunities afforded for his approach by vitiated atmospheres, and diminished capacities.

The air is composed mainly of two gases, *oxygen* and *nitrogen*. But it is the former that makes this almost impalpable ether a vitalizing

medium. Since the atmosphere is a mechanical mixture and not a chemical compound, the quantities of its ingredients are not constant; the quantity of *oxygen* may be greatly diminished, and its place supplied by other gases, most deleterious in their influence. Among these, most frequent and abundant is *carbonic acid* gas, which is being constantly formed in the various natural processes of organic life, vegetable as well as animal. *Carbonic acid* is formed wherever *carbon* and *oxygen* meet. It is a result of all combustions and all decaying changes. In the constant activity of the animal organization, tissues must be exhausted and worn out; and the effete matter, obedient to chemical law in its decomposition, gives rise to elements which form new combinations, *per se* very important anywhere but in the animal system. In the wear and tear of the body large quantities of *carbon* and *hydrogen* are separated from their combinations, and left free to unite with whatever presents itself with sufficient affinity. *Oxygen* is supplied by the process of respiration to all parts of the body, and, meeting these wandering vagabonds, seizes them and tries to eject them in the most agreeable manner possible. With the light *hydrogen* it unites and forms *water*, which is thrown out by the skin, lungs and other depurating organs, and makes but little difference in the purity of the air, save by its ability to hold other substances in solution.

With the *carbon*, that wonderful Proteus of our earth, that gleams in the diamond's flash, or frowns from the black brows of the coal strata, *oxygen* unites in the proportion of two parts of itself to one of the *carbon* to form *carbonic acid* gas, whose influence is always for ill. If inhaled in any quantity it produces insensibility, and if the quantity be increased death inevitably occurs. It is estimated that *one twenty-fifth* of the exhaled air is composed of this gas; and in the course of the day, an ordinary-sized man exhales nearly sixteen cubic feet of this gas; or, by weight, about a pound and a half.

The respiratory function consists of the exchange of these two gases; and no matter what the form of existence, nor what the medium in which it is found, the structure bears some relation to this one point. The essential conditions for the exercise of this function are, a circulating fluid capable of bearing these gases, and separated from the air by a membrane that will allow their transmission. Then, as the air is taken into the system, it is deprived of its vitalizing properties, and is again thrown

out charged with effete matters that would corrupt and impoverish the whole current of circulation, unless constant change were maintained.

The organs by which the passage of air to and from the body is effected, may be considered under two heads: 1. Those by which air is inhaled or taken directly into the system; and, 2. Those by which its operations are carried on throughout the economy. The organs devoted exclusively to respiration are the *trachea*, or windpipe, with its ramifications, and the *lungs*.

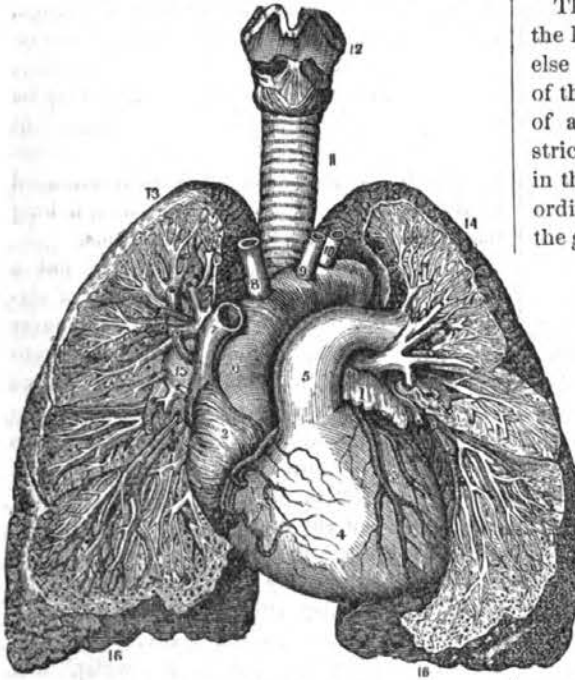
The *trachea* is a tube extending from the back part of the throat down to the upper part of the chest, where it divides into two branches called *bronchiæ*, one of which goes to each lung and there divides and subdivides again and again throughout the whole substance of that organ.

The *trachea* is a tube made up of a series of rings, of a firm substance, called *cartilage*, or, in familiar language, *gristle*. At its summit, that is immediately back of the root of the tongue, is a peculiar arrangement of this cartilage in different shaped pieces, with membranes and muscles attached for binding together and facilitating motion, the whole being named the *larynx*. This is more directly the organ of voice; although voice depends greatly for its strength and beauty upon the condition of the organs of respiration. At every inspiration the larynx separates its walls and the air has free access to the *trachea*, and so through all the connected passages, if unobstructed, to the lungs. The *trachea* is about four or four and a half inches in length, and there are some sixteen or twenty of the cartilaginous rings, mentioned. These rings at their back part are made of a less dense and firm substance than cartilage, which allows the tube to be more or less dilated, as necessity may require. But after penetrating the substance of the lungs, the smaller divisions are entirely cartilaginous, until the most minute ramifications, when the dilatable tissue only is found.

All these tubes, to the very smallest branches, are lined by a smooth, delicate membrane, continuous with that lining the mouth, and called the *mucous membrane*.

The *lungs* are two conical-shaped organs, filling, when inflated, the entire cavity of the chest, except a portion occupied by the heart and large blood-vessels. The chest is the cavity bounded at the back by the spine and ribs, at the sides by the ribs, in front by the ribs

and breast-bone, below by a strong floor called the *diaphragm*—a musculo-cartilaginous membrane, separating the chest or *thorax* from the belly or *abdomen*. The bones forming this cavity are covered by muscles, and then lined by a fine, soft membrane called the *pleura*; this also covers all the organs contained in the chest.



THE HEART AND LUNGS.*

The ribs are attached to the spine so as to allow of but little motion; but in front they do not touch the breast-bone, but are connected therewith by long pieces of cartilage, which allow great freedom of motion when not compressed, and by reason of which it is possible to take in large quantities of air.

The subdivisions of the bronchial tubes, already mentioned, become at last not more than the one-hundred-and-twentieth of an inch in diameter, and then open into collections of small vesicles called air-cells. These vary in size from the 1-200 to the 1-70 of an inch in

diameter. Upon the surfaces of these cells are distributed the smaller divisions of the blood-vessels, bringing and carrying the impure and the pure blood for purification and distribution through the body. The number of these cells is very great, and their extent of surface has been computed at 21,906 square inches.

The greatest degree of development to which the lungs attain is found in man, and nowhere else is there any disposition to deprive them of their full and proper growth. The amount of air which the lungs may contain, or, in stricter language, "the breathing capacity," is, in the unobstructed chest of a healthy man of ordinary size, 230 cubic inches. This means the greatest quantity of air that can be expelled after a full inspiration. But how many young women of the present day have a capacity proportional? A deficiency of sixteen per cent. is to be regarded as a most clear indication that something is very wrong. And yet, so great are the powers of nature to resist the encroachments of disease, that even *ninety per cent.* deficiency has been observed in cases of pulmonary consumption!

The amount of air that may be taken in at each inspiration is about twenty cubic inches; and a little less than that amount is thrown out at each expiration. Now, when we consider the capacity of the lungs and air-tubes therewith connected, and the small amount of air received at each inspiration, how important it seems that this quantity be never diminished by improper habits, nor vitiated by worse conditions. If the breath be held for a few seconds, the expired air will prove, if received under a glass jar, incapable of supporting combustion. When the air received into the lungs has done its work, it is found to be heavily laden with *carbonic acid gas*. Atmospheric air is much lighter than this gas, and the diffusion takes place by reason of the elasticity of the lungs, which are compressed upon it during the movements of respiration, and in accordance with the established law that "the diffusibility of gasses is inversely proportionate to the square root of their densities;" so that more *oxygen* is always absorbed from the inspired air than *carbonic acid* from the vitiated air is exhaled. By reason of the constancy of this diffusion after this manner, the air in the smaller vesicles of the lungs is of a very uniform composition; and the process of aeration is not of an intermittent character, as is the mechanical process of respiration.

* The engraving shows the bronchiæ and blood-vessels of the lungs as revealed by dissection, and also the heart: 1, end of the left auricle of the heart; 2, the right auricle; 3, the left ventricle with its vessels; 4, the right ventricle with its vessels; 5, the pulmonary artery; 6, arch of the aorta; 7, superior vena cava; 8, arteria innominata; 9, left primitive carotid artery; 10, left subclavian artery; 11, the trachea; 12, the larynx; 13, upper lobe of the right lung; 14, upper lobe of left lung; 15, trunk of right pulmonary artery; 16, lower lobes of lungs. The distribution of the bronchiæ and of the arteries and veins, as well as of some of the air-cells of the lungs, is also generally shown.

In the earlier ages of science, the function of respiration was but slightly comprehended. Learned men had noticed that air was necessary to life; but it was generally considered, when any tangible idea was obtained, that it was necessary to maintain a low temperature of the blood. It was not until the investigations of chemistry demonstrated the fact that the air is a mixture, that its relations to our bodies were realized.

In the latter part of the fifteenth century, Leonardo di Vinci, the great painter who combined high scientific attainments with his artistic skill, discovered that air was changed by the combustion of substances; and that animals could not live in an atmosphere that would not support combustion.

Later, nearly two centuries after, Von Helmont made some discoveries relative to *carbonic acid*, and demonstrated the peculiarity of the air of the Grotto del Cano, where a man walks with impunity while the dog at his side is rendered senseless or lifeless by the lower strata of air, which prove to be *carbonic acid gas*. From that time to the present there is no limit to the number and character of experiments that all and singly go to prove one thing, viz., that air in its normal purity is necessary to life, and that its influence depends upon its composition, which is materially changed during the process of respiration. But to the great Lavoisier is due the credit of applying these substantiated theories to practical demonstration. Having learned the nature of the metallic oxides, he made careful note of other combinations of *oxygen*, and marking the relation of this element to other substances in the body, laid the foundation of the present understanding of this great function.

Pure air is a mechanical mixture of *oxygen* and *nitrogen*, about twenty-one of the former to seventy-nine of the latter. It also contains a small quantity of *hydrogen* in the forms of *water*, *ammonia*, etc., and *carbonic acid*, about one part in two thousand parts, by volume. But, of all these ingredients, only with *oxygen* do we care to deal, when considering the function of respiration. For perfect health there must be about four times as much *nitrogen* as *oxygen*, and when these proportions are greatly varied the effect is at once manifest. Life could not be maintained in pure *oxygen*, because of the excessive exhilaration it causes and the following depression. A large number of experiments have been instituted to show the effects of this gas upon the animal economy, and although the amount varies

somewhat with the conditions, its necessity is never doubted; and its combination with *carbon* in the system to form *carbonic acid* is none the less certain.

From the pulmonary surfaces, also, is thrown out a large amount of waste material of an organic nature, which may readily be demonstrated by breathing freely into a sponge, which after proper time will give evidence of putrefaction. The odor of onions, turpentine, and other strongly-flavored substances may be detected in the breath, showing how important are the lungs as eliminating organs. Any interruption in the respiratory process is attended by a sense of suffocation *at once*, and, if long maintained, the effects are most serious.

As a general thing, respiration is not a recognized act; we breathe at the rate of sixteen or eighteen times per minute, and never think of it, unless our attention be thereto directed. But if there be the slightest degree of abnormal condition, we immediately experience a consequent uneasiness, which increases as the cause remains or increases.

And in view of all these important facts, what shall we say of those who persistently allow themselves to be deprived of pure air, or the ability to enjoy it? How many young women are, to-day, thickly sowing the seeds of early disease and painful death?

"Seventeen inches round the waist," was the order sent for a pair of corsets by a girl five feet in height, and weighing one hundred and twenty pounds, or more, as I heard it given not long since. Her complexion is sallow, her form is losing its symmetry, and headache is her constant attendant, accompanied by "pain in the side." Will nature long submit to such outrages? Is it necessary to add to the mass of literature already existing upon "ventilation," "purifying the blood," etc.? Need we dilate upon the hideous deformity of small waists and pimpled faces, of awkward gaits and emaciated limbs, of foul breaths and dingy complexions? Let each one make careful self-examination and see what is needed, and at whose door shall be laid the responsibility of this *sin* of debilitated bodies and depressed moral conditions. Our bodies are of the "talents" given us to use, and we can not escape if we recklessly waste or destroy them; and though "this corruptible shall put on incorruption," it is none the less certain that we are expected to preserve and strengthen these temples of usefulness while time exists for us, and at last to give a strict account therefor.

INEBRIATE ASYLUMS—THEIR UTILITY.

THE great need of civilization in its dealings with vice and crime is, measures of reform rather than methods and processes of punishment. Of late years our political economists have become impressed with this truth, and now and then we find elaborate articles in the periodicals of the day discussing the instrumentalities which should be put into exercise for reforming, elevating, and improving in a substantial way the character of those who fall under the ban of the law. Our attention has been lately called to this subject by reading the excellent and encouraging report of the Superintendent of the New York Inebriate Asylum at Binghamton. When the subject of establishing an asylum for the reform, or rather cure, of inebriety was first introduced, it received much unfavorable criticism, especially from moral theorists, the main ground of objection being, substantially, that if the drunkard were not stimulated to amend his ways from considerations of self-respect, he would not be likely to be benefited by any external instrumentalities, and therefore that the opening of an asylum for the reception of this class of unfortunates would be an additional tax upon the community. Several years have elapsed since the first asylum was opened, and the experience of the management has proven conclusively the beneficent character of such an institution. Year after year witnesses improvements in the methods of treatment, and results most happy in their effect upon perverted human nature. The principle on which the inebriate asylums is based is that intemperance which has become habitual to a man exists in his case as a disease. This view is warranted by the best medical authority.

The Superintendent in his report discusses the injurious effects of liquor-drinking, as a highly intelligent physician, in the following terms :

“With the general admission that alcohol is an irritant-narcotic poison, a prominent and leading poison in that class in Toxicology, I will not discuss the point, but proceed at once to consider its effects upon the system, when used excessively or intemperately. Its first effect, when so used, is to cause func-

tional disorder, which, if persisted in, will invariably result in organic disease. The diseases produced by the excessive use of alcoholic drinks are numerous and often fatal. From its direct and sudden action on the nervous system and brain, we have a long list of diseases, such as impairment of all muscular power, muscular tremor, vertigo, hallucinations, want of sleep, watchfulness, palpitation of the heart, paralysis, apoplexy, delirium tremens, convulsions, and insanity. Nearly all the foregoing diseases may be attributed to exhausted function in the brain and nervous system. No organ or tissue of the body is free from its influence. The principal organs upon which it expends its chief force are the brain, lungs, stomach, bowels, liver, and kidneys; from the same cause, disease of the heart and arteries may occur separately, and may be found in connection with some other disease. I will only notice a few of the more prominent and important diseases. One evident action of alcohol is to increase the action of the heart and arteries, causing congestion of the brain and its membranes, often resulting in serious effusion, as is indicated in the inebriate by a bloated face, etc. We have inflammation of the brain and its membranes from the foregoing cause, and from the direct influence of the poison. Besides congestion, inflammation, and effusion within the cranium, we have induration and softening of the cerebral substance. The symptoms of these various functional and organic changes or lesions in the brain, are shown in the inebriate by a weakened intellect, a general debility of the mental faculties, impairment of vision, a partial or total loss of self-respect, and a perfect departure of the power of self-control; all of which, acting together, he is utterly unable to cure or relieve by his own unaided efforts, and which will inevitably destroy him, unless timely aid comes to his relief. We have chronic gastritis and enteritis (inflammation of the stomach and bowels) as the result of the inordinate use of alcoholic beverages, and dyspeptic complaints are seldom absent in these subjects. We frequently have organic diseases of the liver and kidneys, resulting from intemperate habits, such as cirrhosis,

fatty degeneration and chronic inflammation of the liver, acute and chronic albuminuria (commonly known as Bright's disease of the kidneys), which are common among inebriates, and often fatal. These various diseases, with their lesions, have no connection with delirium tremens and convulsions, which, so far as dissection goes, throws no special light upon these particular diseases, which must be considered and regarded as strictly functional. Many other complaints and diseases of a serious and even fatal character might be adduced as the result of intemperance, but enough have already been noticed to warn the unfortunate man in his career of self-destruction. Before closing this paragraph, I desire to call the reader's attention to a few other facts in connection with the intemperate use of alcoholic drinks. It predisposes the system to nearly every form of acute disease—to those especially of an inflammatory nature, and to those arising from an impaired nutrition. For the same reason it predisposes the system to attacks of an epidemic, and when the predisposition to any disease, from any other cause, is moderate and limited, and may be readily arrested, the existence of this habit alone will insure its development and lessen the chances of recovery; and the fact is recognized by all medical men of experience that when the intemperate habit is associated with the diseased subject, the prognosis of the case is made invariably more unfavorable."

The man who has arrived at the condition of disease, who has lost his power of self-control, and yet fully appreciates his sad state, finds in the inebriate asylum something very much better than a forlorn hope. Those poor wretches whose moral sensibilities have become so blunted and imbruted that they can not "see themselves as others see them," who still, notwithstanding all this bold inconsistency, harp upon their moderate indulgence, will not voluntarily accept the relief and cure offered by such an institution. If they yield to the strong persuasion of friends and become patients, they rarely receive more than temporary relief. That there are such men to be found among the inmates of an inebriate asylum is shown by the report. The number of patients discharged in 1871 after treatment was two hundred and thirty.

Of these one hundred and eighty-four were considered reformed, while forty-six were discharged unimproved.

This most humane effort to help the fallen, to restore to usefulness and honor those who formerly occupied high positions in society and were regarded with respect and perhaps admiration before the demon of appetite insidiously obtained sway, should be regarded with gratitude and maintained with vigor. All the agencies, all the instrumentalities which may be needed by its efficient officers for carrying out their great and noble work, should be most cordially accorded. The inebriate asylum not only accomplishes a good work for those who have yielded to the influence of immoderate habit, but by reason of its very existence exercises a strong moral influence upon society. It is a beacon to warn men who are disposed to indulge in alcoholic beverages that they may in time become diseased; that from moderate drinkers, or from drinkers who only now and then take a social glass, they may degenerate into that form of mental derangement which, like opium-eating, craves continual indulgence. To be sure, some persons are more susceptible of this sort of infection than others. Some are so constituted, temperamentally and physically, that with their first draught of wine they recognize pleasure in its use, and so easily and unconsciously become confirmed drinkers. This class of unfortunates, however, is not large, and is made up in great part of those who have inherited a predisposition to alcoholism. How terrible the thought of the transmission of a vicious propensity to offspring! of the very predisposition of children to careers of vice and resultant misery! For it is a fact well established by investigation that of those who inherit this predisposition the great majority lead miserable lives, and few escape being afflicted with disease or physical deformity; and it is also a very notorious fact that of all the crimes committed, fully seventy-five per cent. is chargeable to intemperance. Here certainly is reason enough for the establishment of many inebriate asylums, and the wide-spread diffusion of information with reference to their philanthropic work. With their increase it seems clear enough that the public institutions which have been found

necessary for the discipline and correction of offenders, and the asylums and hospitals which so thickly strew the land will be reduced in number, for the inebriate asylum not only cures the willing and appreciative patient, but reforms his character in other respects; and when he steps forth from its precincts in all the glory of renewed manhood, he introduces elements of amelioration into the society which he again frequents, and so becomes an agent for society's redemption.

Consider the large proportion of inebriates who may be reformed in this way! Of those discharged from the Binghamton institution in 1871, forty-six, or about twenty per cent. only, are mentioned as unimproved. Taking this as a basis for estimating the beneficial effect of such institutions on society, we may be warranted in the statement that four-fifths of the intemperate class would be saved for usefulness. To be sure, as the system is practiced now, those who enter such an asy-

lum do so voluntarily, but in the event of a wide-spread diffusion of this department of philanthropic effort, homes for the victims of alcoholism would become features in every well-ordered community, and their inmates would reasonably assume a position analogous to that of lunatics. The success of the modes of treatment usually pursued is quite evident from the Secretary's report, to wit: that although fifty-two of the patients had delirium tremens, twenty-two convulsions, and fifteen both delirium tremens and convulsions, not one death occurred.

Another fact, which militates seriously against the use of tobacco, is found in the statement that of the two hundred and forty-four patients received since January 1st, 1871, two hundred and twenty-six were users of the poisonous weed. It is not by any means our design to preach a temperance sermon, for it is not at all necessary in this place, the facts which we have been considering being themselves a cogent homily on the subject.

SCIENCE AT HOME.

WITHIN the last half century science has been brought to the comprehension of the common people to an extent ten times greater than in all the world's previous history. A century ago chemistry and physiology, the great sciences of sentient and insentient being, were very little understood by learned men, and to the common people they were very much like the sought-for *terra incognita* of the North Pole—cold and unknown. The knowledge at present possessed by the common people, however, on these great subjects is very limited, shamefully so, because most men and women have not taken the trouble to learn something of the house they live in, of the chemistry of the food they eat, the air they breathe—something of the necessity of learning these laws and adapting themselves to them. But scholarly men have, to a greater extent than is desirable or commendable, shown a tendency to make their knowledge an occasion of exclusiveness. The doctor has kept his physiology to himself, and regarded his associates as a kind of guild who carried the sacred trust of physical science to be used as a means of mysterious distinction and elevation and as a source of profit; and the chemist has in his laboratory, with "No Admittance" over the

door, been experimenting for his own profit and honor, forgetting that great philanthropic law expressed in the Scripture words, "There is that scattereth and yet increaseth, and there is that withholdeth more than is meet, but it tendeth to poverty." We believe that learning in every department should be diffused widely and liberally. He who has learned the way to happiness and Heaven should not hide his light from the masses; he who is learned in the law should teach the public justice; he who is learned in physiology should explain to the masses the way to retain health or acquire it when lost. A general diffusion of knowledge on this subject would not make physicians unnecessary. It might lessen the number and raise the standard of those who were left; but we believe that no man more willingly pays a physician for his advice and attendance than he who is largely conversant with the laws of his own constitution. And he who has some knowledge of the law, if he has occasion for legal advice, will willingly seek and pay for that advice; but he does not go to a fourth-rate lawyer. If he seeks for an opinion he seeks for a good one, and respects it and pays for it.

The science of mind has been wrapped up,

like an Egyptian mummy, within the antique folds of mystical names—names so unmeaning, or so uncertain in meaning, that few besides those who invented and used the names could understand their signification, rendering the witty Scotchman's explanation nearer the truth than is generally supposed. Being asked, "What is metaphysics?" he replied, "When the man spoken to dinna ken what the man speaking means, and the man speaking dinna ken exactly what he means himself, that is metaphysics." Phrenology has opened this great field of inquiry, has simplified the philosophy of mind, and in the last fifty years the world has made rapid strides toward the comprehension of the intricate subject of mind. One-half of the people of the United States who are able to read do not have to be told the meaning of Combativeness, Destructiveness, Cautiousness, Self-Esteem, Firmness, Conscientiousness, Veneration, Benevolence, Philoprogenitiveness, Causality, or Eventuality, and millions of our countrymen know the definition of every mental faculty and the office which it is intended to perform. The writers for newspapers, as well as novelists, employ the terminology of Phrenology in many instances as the readiest method of communicating their thoughts to the public, and we can follow many who do not use the terminology, but describe mind according to Phrenological science, and we perceive the source of their information.

The insane to-day are treated much more successfully than formerly, and the most eminent men in this department of medical science understand and acknowledge Phrenology as their source of success. And even the pulpit, in many instances, has learned that Phrenology is the most effectual guide to the treatment of theological subjects. Some ministers do not deem it proper to confess that Phrenology has helped them, while others are manly and courageous enough to use Phrenological terms themselves in the pulpit. Another half century, we trust, will make every intelligent man informed on the subject of Phrenology, so that its terms will be considered not only the shortest, but the best mode of communicating thought relative to mind in the pulpit, at the bar, through the press, and in social conversation. The reason Phrenology has made more rapid progress with the people than some other sciences is, that it has not been hidden by a profession or locked up in dead languages. Many books have been published illustrating and explaining the subject in a clear and familiar manner, adapted to easy comprehension;

lecturers have disseminated the new philosophy, and the PHRENOLOGICAL JOURNAL, for more than a third of a century, has gone forth a monthly messenger to the ends of the civilized world, and many thousands have eagerly accepted the teachings and sought to apply them to their bodily and mental improvement.

Some physiologists have been bold and generous enough to teach the laws of the human body. They have written and lectured until thousands to-day understand much relative to their structure, how to maintain it in health and how to recuperate when over-worked or otherwise depressed, and still the medical profession is not run out, nor is it likely to be. As book after book on divers subjects calculated to benefit men in daily life are brought out, we hail the fact as a harbinger of good to the human race. In this connection it is not out of place to mention a new and deservedly popular book which our enterprising neighbors, Messrs. Hurd & Houghton, have recently published, entitled "Fireside Science." The author, Dr. James R. Nichols, is the editor of the *Boston Journal of Chemistry*. He treats his topics in a familiar, clear, and vigorous manner, and his labor is calculated to serve an excellent purpose. This work has the simplicity of a narrative, and awakens an interest equal to a romance, and yet has to do with the common daily interests and duties of life. Its articles relate to farming, cooking, health, composition of the human body, warming and ventilation of houses, guarding against infectious diseases, and many other things which minister to health, safety, and happiness.

ANOTHER GHOST STORY.

THIS appalling incident came under my own notice:

In the fall of 1867 I lived at Auckland, New Zealand. We were in the habit of taking a ride on horseback every day about five o'clock p.m., when the sun was declining, returning at seven to our evening meal. We had trotted through the usual fashionable ride, had left it behind us a few miles, and now verged out on the common toward a clump of acacia trees in full fragrance, a very favorite resort of ours, and generally the end of our daily ride. We were about turning, when my sister Kate proposed our going a little farther to get some wattle bark to dye a crayfish net she was making in anticipation of an excursion to a small rocky island the next week; so we pushed on, my sister and a friend going ahead.

They had reached the wattles when suddenly we heard an unearthly scream from Kate, whom we saw bent down to her saddle holding on to the horse's mane. The horse kept backing and trembling as if he saw some frightful object too, and poor Kate, without ceasing to scream, called out, "God have mercy! God have mercy! take me away! take me away!" When we galloped up, her escort, who had dismounted, was leading the horse away and holding her on at the same time, while to us her mind seemed quite gone.

Back on the road again, we happily met with a wagonette. We put her in, propping her up with cushions and loving arms. For two days she lay in her bed insensible; and more than a week elapsed before her full memory returned to her, when the story we heard was this:

The wattle trees they had reached were very thickly grown together; probably there were two or three hundred of them; the light of day could not penetrate, but piercing the darkness she first saw a white object. Looking steadily at it, it came toward her *through trees and branches* which seemed to be no impediment. When near enough, it stopped; and now the sight was horrifying—it was naked to its waist; the blood streaming from wounds with the arrows still in them, and hanging on the outside, the liver and heart torn and dragging from the body. This was frightful! before she lost consciousness she noticed the lips moving and the hand pointing downward.

A consultation was held among her friends. The two gentlemen of the party consulted the coroner as to the feasibility of inspecting the place. A day was fixed: four gentlemen, the coroner himself being one, and two laborers with shovels, who were kept in the dark as to the proceedings, all sallied from the town at ten o'clock in the morning. Arriving at their destination, they had to cut away some of the branches to get through. It was not long before a fearful deed became apparent. On the surface of the ground was a man's skull, with the bones of the arms and limbs, some chopped in two, with the remains of a fire close by. Gathering the bones together and looking around for other evidences of the fearful crime, they found, hanging on a tree, a piece of cloth tied so as to form a bag; in it were a few sovereigns and a paper stating that the unhappy man was Theodore Betts Armstrong; that the New Zealand cannibals had made him prisoner, and intended to devour him. He stated, on the paper, he knew nothing could save him. He had been tied round the waist to the tree, but

his hands being free he made this effort to tell his fate. The most remarkable part was that this Mr. Armstrong was Kate's uncle, and through his remains being identified, not only by the written statement, but by one of the teeth having a small gold plate attached, a verdict in law was given in her favor, by which she came into a fortune of twenty thousand pounds (\$100,000) and a large tract of land, her uncle having been one of the first settlers in New Zealand. *Senga Enryb.*

A VOICE FROM STATE'S PRISON.

IN the interest of poor fallen humanity we publish the following letter, which clearly explains itself, and suggests a remedy. Will the authorities heed these suggestions? Will they not provide the necessary books and educational facilities, by which convicts may be improved and rendered self-supporting? Or, will they continue to keep and send them forth on the same low plane on which it found them? Is this "doing as we would be done by?"

SING SING PRISON.

DEAR SIR—I hope you will excuse me for taking the liberty to trespass on your very valuable time long enough to lay my case before you. I am a well-meaning young man, but through some unknown (to me) agency I have got into prison. I don't wish to rob any one, and, still less, murder any one; however, I came near doing both, although I did neither. I was not drunk at the time, as I never use either rum or tobacco in any form, but still, though I was a hard-working young man, in an evil moment I fell. I went out to enjoy myself in the evening, met a few others, one of whom I knew, and in less than an hour I was in the station-house on a charge of larceny and feloniously assaulting a peaceable citizen.

God knows I was not guilty in thought, word, or action, but still, being in their company, I had to abide by the consequences—four years and six months in prison at hard labor. But, as I was caught in bad company, I firmly believe I only got my just deserts. When I came here I could not write my name, but through the aid of a fellow-convict I managed to earn the price of a few books and a slate, and went to work to learn all I could before my time expired. I can spell every word in my "definer" correctly, but I now wish to know more. I asked a permit from our agent and warden to have some blank-books to learn the theory of book-keeping, and his reply was, "I knew as much as he did." Well, I, being a convict, could not gainsay him, and *perhaps* he was right after all. Now, what I wish to ask is this: What do the people use prisons for? Is it to lock men up *for a time*, and then turn them loose without a week's board in their pocket, their character for honesty gone, etc., without a trade, or even a little schooling to enable them to earn a livelihood in future?

Nevertheless, this is just what is being done here every day. The authorities think of, and study nothing else, than how to rob the State. Of course, I need not tell you how well they succeed. I have several of your books, and as I know you would not do even a convict injustice, I write this to urge you to appeal to the public, through the medium of your valuable JOURNAL, to look into the matter. Give us a trade, a little schooling, and a situation on going out of here, and the result will show for itself. I am willing to work for nothing but my board and clothes for some good man, if he will be kind enough to educate me. I mean, of course, after I get out. I never knew the benefit of an education till I came here, and had so much time, nights and Sundays, to think of it. If I was a scholar, I could fill a large book about the doings of this place. However, I mean to come and see you when I get out, and you may depend on being astonished when I do.

Hoping you will give this publication, and that it may bear fruit, I beg leave to sign myself *at present*.
CONVICT.

[Now, if the same facilities were afforded for educating prisoners, intellectually and religiously, that are afforded to the less needy classes, is it not probable that, when their terms of confinement expired, they would, every man of them, come out better than they went in? And is not this as desirable for the State and the nation as for the individual? Let preachers, lecturers, and teachers instruct those hungry-minded victims, and fit them for the duties of life, which are hard enough even for those most favorably constituted. Who will move or take the lead in this good work? God will bless every well-ordered effort in this direction

HISTORY OF PHOTOGRAPHY IN AMERICA,

WITH PEN PORTRAITS OF PROMINENT WORKERS.

CONTENTS.—History of Photography—Niepce, Daguerre, Talbot—John W. Draper—Samuel F. B. Morse—Alexander S. Wolcott—Edward Anthony—Henry T. Anthony—Albert S. Southworth and Josiah J. Hawes—M. B. Brady—Abraham Bogardus—John A. Whipple—George G. Rockwood—F. A. Wenderoth—William Kurtz—William Nottman—Lewis M. Rutherford and D. C. Chapman—E. and H. T. Anthony & Co.—A few Hints to the Public—Appropriate Costume—The Gem of a Photograph—The Future of Photography.

HISTORY OF PHOTOGRAPHY.

THE sun is a fervid, assiduous artist, and has for countless ages photographed beauty on the face of nature. The bloom on the maiden's cheek and the gorgeous radiancy of the tropical scene are alike the product of his pencil. Doubtless Old Sol would have continued to practice his art to suit his own fancy had not Prometheus Niepce rudely snatched his implements. Two centuries ago Giovanni Baptiste Porta, a Neapolitan physician, invented the camera-obscura. But this valuable instrument was regarded as nothing but an ingenious toy until about 1814. The peculiar effect of light on a combination of silver with chlorine is one among the precious discoveries made by the alchemists, who, though they failed in finding the key to the mystery of transmuting the base metals, did find philosopher's stones of greater value. The Swedish chemist Scheele, born in 1742, demonstrated, by means of the spectrum, that the violet ray had the greatest power in decomposing the chloride of silver. The attention of the prominent scientists of Europe was directed toward the effect of light on this substance, but their investigations were fruitless. Several years prior to

Daguerre's discovery, Hoffmeister suggested that the sun might be made to act as an engraver, but he merely announced it as a fancy. The first vigorous effort to create a sun-painting was made by Josiah Wedgewood and Sir Humphrey Davy. These gentlemen applied a coating of nitrate of silver to paper or leather, which was spread on a frame. By means of the solar microscope they were enabled to obtain faint images on this receptacle, which soon vanished, as they had no means to render them permanent. Their process was published in the journal of the Royal Institute in 1803. In 1812 Courtois, a chemical manufacturer in Paris, discovered iodine, the agent which was all-essential to the attainment of permanent sun-pictures. But it was reserved for Niepce to be the first to use it. Joseph Nicépore Niepce was a French merchant who had acquired a competency and resolved to devote himself to experimenting on the properties of light in order to obtain permanent photographs. After many trials his labor was rewarded with success, and in 1814 he accomplished the grand result—he made the first permanent photograph! He then demonstrated the value of the camera, for it was through its

instrumentality that he made his pictures. He also utilized iodine as a developer. Niepce's process was to coat a glass or metal plate with a species of asphaltum known as the "bitumen of Judea," instead of the salts of silver. This he placed in the camera, and in five or six hours the action of light caused the bitumen to dissolve so as to delineate an object, and the image was fixed by oil of lavender. Some specimens of Niepce's work are preserved in the British Museum. They are of an exceedingly rude character, but resemble the daguerreotype. Niepce named his process Heliography.

In 1819 Sir John Herschel discovered the hyposulphite of soda, a substance which was destined to exercise a potential influence on heliography. In 1826 Niepce became acquainted with Daguerre, who had for many years previously directed his energies in the same direction as himself, but had met with indifferent success. Louis Jacques Maude Daguerre was born at Cornouilles, in France, in 1787. He was by profession a painter, but had acquired considerable distinction as a scientist. He was a prominent member of the French Academy of Fine Arts. In order to promote their investigations they resolved to unite their efforts, and they accordingly entered into a formal copartnership.

In 1829 the partners conceived the idea of using iodine in the form of vapor. This they applied to a highly polished surface of silver, and the iodide of silver thus formed was exceedingly sensitive to the action of light. By this means the time of exposure was reduced from hours to minutes. In 1833 Niepce passed away, and his son Isidore succeeded him as Daguerre's partner. In 1839 an arrangement was effected with the French Government, by the terms of which the process was to be given to the world, in consideration of an annual life-pension of six thousand francs given to Daguerre, and of four thousand francs to Niepce, with reversions of one-half those sums to their widows. By universal consent the title of "daguerreotype" was given to the new art, but perhaps with as little justice as the name of Americus was bestowed on the New World. The honor of making the first permanent picture most certainly belongs to Niepce. But it is not the writer's intention to detract from the

actual credit which is due to Daguerre. For fourteen years he strove to attain the grand result. So devoted was he to his purpose, to the exclusion of all other concerns, that, in common with many other eminent inventors, he incurred the reproach of insanity. Even his own wife was induced to share the general belief. M. Dumas, the distinguished French chemist, narrates that Madame Daguerre, in 1825, urged by anxiety for her husband, approached him, at the close of a lecture, and said, "Monsieur Dumas, as a scientific man I have a question of vital importance to myself to ask you. I am the wife of Daguerre, the painter. For some time he has let the idea seize him that he can fix the image of the camera. Do you think it possible? He is always at the thought; he can't sleep at night for it. I am afraid he is out of his mind. Do you think, as a man of science, it can ever be done? or is he mad?" "In the present state of knowledge," replied Dumas, "it can not be done; but I can not say it will always remain impossible, nor set the man down as mad who seeks for it."

It is a singular fact that Daguerre was opposed to sitting for his portrait, and obstinately refused to be daguerreotyped except in one instance. Mr. Charles R. Meade, of New York city, enjoys this distinction. Aided by the advocacy of the wife and niece of Daguerre, Mr. Meade prevailed on him to sit for his portrait, and numerous copies were afterward produced.

We will now compare the processes of Daguerre and Niepce. Both used the camera. Daguerre's receptacle was iodide of silver on a metal plate; that of Niepce was bitumen on a metal plate. Daguerre used the vapor of mercury as a developer; Niepce employed iodine for the same office. Daguerre used the hyposulphite of soda as a fixing agent, while Niepce made the oil of lavender answer the same purpose. When first Daguerre subjected the iodidized plates to the action of mercury he failed to develop the image. But during one of his trials he accidentally discerned a dim image on that portion of the plate which had been least exposed to the heat. This discovery induced him to reduce the temperature, and his triumph was at once assured.

Totally ignorant of the experiments of Niepce and Daguerre, Henry Fox Talbot was silently pursuing the same object in England. Six months before the publication of daguerreotypy, on January 31st, 1839, Mr. Talbot addressed a paper to the Royal Society announcing a photographic process of his own discovery. The method practiced by him was to immerse paper in a solution of common salt, and afterward in one of nitrate of silver. This produced a film of chloride of silver, which is more sensitive to the influence of light than is the nitrate. On this surface was applied the object to be imaged, which was of course to be transparent. When subjected to the rays of a blazing sun for a period of half a second, an inverted image was produced. This, the negative, was again copied by the same process, and a positive print was obtained. To Talbot, then, belongs the glory of first printing from a negative, and of devising a method to multiply copies of pictures. In 1842 he substituted iodide of silver as his receptacle, and used hyposulphite of soda as a developer. All that was now necessary to render photography a truly magic art was the discovery of some material which would produce an instantaneous image.

In 1851 Frederick Scott Archer, an Englishman, discovered collodion—a preparation of gun-cotton. Collodion is the photographer's sublime elixir. Nature in all her moods can be photographed by its agency. The collodion process is almost instantaneous, sufficiently so to image the flowing water, the vagaries of the atmosphere, and the ever-changing expression of the features. Itself the offspring of science, photography has become its most useful ally, and it would be impossible to estimate its precious services. Aside from its application to depicting animated scenes, it has rendered inestimable aid to chemistry, to geological investigation, to medical and surgical science, and in the service of architecture and many branches of manufacture. In fact, it would require the space of a large volume to properly describe its efficiency. All honor be, then, to the grand trio, Niepce, Daguerre, and Talbot, who, impelled by the same divine impulse, independently solved the same great problem by different methods. Doubtless philosophy will yet recognize those subtle, mysterious laws which

control the human mind and banish forever the word "accident" from its vocabulary.

PHOTOGRAPHY IN AMERICA.

Hardly more than a quarter of a century has elapsed since Professor Gouraud visited America in order to lecture on Daguerre's new art. He exhibited specimens of sun-painting made in the presence of his audience; but beyond the manipulation and exposure of the sensitized plates, he had nothing to teach. In 1839 sun-painting was practiced as a business by but two individuals in the United States. Now, it is computed that photography in America, in all its ramifications, furnishes employment for not less than fifty thousand persons, and a capital of not far from five millions of dollars is active in its service. It has steadily advanced from a rude mechanical operation until it has attained the dignity of a fine art. Although great improvement has been made in apparatus and material through the characteristic ingenuity of our countrymen, yet the improvement in the instruments of photography is proportionately insignificant to the advance made in the development of the art itself. In fact, esthetics have received from photography new laws of surpassing exquisiteness. Thirty years ago the apparatus of the photographer mingled insignificantly among the stock of the hardware merchant. To-day, immense capitals, large factories, and extensive warehouses are set apart for the manufacture and sale of photographic stock. Thirty years ago the camera rudely painted an insensate image. To-day, it is taught to reflect the soul's secret emotion, and to portray vividly, not the mere outlines of form and feature, but the subject as he is, and introduces him for the first time to an intimate acquaintance with his own lineaments. The story of this eventful thirty years may best be told in narratives of the lives of those workers whose labors most largely contributed to promote progress. We begin with a sketch of

PROFESSOR JOHN W. DRAPER.

This gentleman claims the honor of having made the first sun-portrait of the human face. For several years prior to the discovery of Daguerre, Professor Draper had been engaged in investigating the chemical effects of light. When Talbot's process was pub-

lished, Mr. Draper commenced a series of experiments with the view of reducing the time of exposure, in order to apply it to the portrayal of animated objects; for the time required was too long to permit the sitter to retain a rigid posture throughout the operation. He thought that by using lenses of larger diameter and shorter focus he might succeed in reducing the time. He used lenses of five inches diameter and seven inches focus, and succeeded. His first attempt at human portraiture was made in an ordinary room, and the sitter's face was dusted with flour, as he supposed that the shadows on the face could not be imaged. But observing that the dark spots of the dress were imprinted, he removed the flour and solved the problem which even Daguerre despaired of seeing accomplished—he had daguerreotyped the human face! Professor Draper subsequently associated himself in business with Professor Morse, and they fitted up a studio in a glass structure on the roof of the New York University. Here they did a flourishing business.

Sir David Brewster, in an article which appeared in the *Edinburg Review* for January, 1843, gracefully refers to Dr. Draper as being the first to make sun-paintings of the human face. Dr. Draper soon dissolved his business connection with the art, but has ever devoted himself to its interests. He has written many valuable essays and treatises on photography, many of which have been translated into the languages of Europe. He was chosen the first President of the New York Photographical Society. If photography was invented in the old world, it was in America that its capacity for usefulness was developed. Next in honor to the name of the inventors of daguerreotypy should be placed that of Dr. Draper.

PROFESSOR SAMUEL F. B. MORSE.

It is not our purpose to give an extended sketch of this distinguished scientist, but merely to confine our attention to his connection with photography. In the spring of 1839 Professor Morse, being in Paris, was invited by Daguerre to inspect the result of his experiments. Professor Morse was at this period the President of the Academy of Fine Arts in New York. Daguerre was then waiting for the French Government to secure him a pension before he published his process. The specimens shown to Morse by

Daguerre were some delineations of inanimate objects. Professor Morse suggested to Daguerre the feasibility of taking portraits of living subjects. As the time required for portraying varied from fifteen to twenty minutes, Daguerre declared that in his opinion it would be impracticable for that purpose. After Professor Morse returned to America, still cherishing the belief that life-portraits could be produced, he constructed the necessary apparatus; and in order to experiment in that direction, owing to the rudeness of his instruments, he labored under many difficulties. He first daguerreotyped the Unitarian church in this city, in September, 1839. He next undertook to make portraits of his daughters. He improvised a studio on the roof of a house. After a sitting of ten or twenty minutes in the face of the sun, he was delighted to find that he produced excellent portraits. Professor Morse believed that he had made the first life-portrait, but the weight of evidence tips the scale in favor of Professor Draper. Between these two gentlemen, however, the honor lies divided. They associated themselves subsequently as partners, and engaged in the practice of photography. The partnership, however, was of brief duration, and Professor Morse continued the business alone in order to obtain the means necessary to accomplish the great purpose of his life—the consummation of the electric telegraph.

ALEXANDER S. WOLCOTT

lays claim to having been among the first to have made life-portraits. In 1840 he made an improvement in the apparatus by introducing into use a reflector of wider aperture and shorter focus. The improvement was recognized and adopted abroad. Mr. Wolcott, in connection with his partner, Mr. John Johnson, likewise discovered a valuable chemical combination known as "Wolcott's Mixture," which is peculiarly sensitive to the action of light.

Dr. Goddard, in 1840, being at the time engaged in the Pennsylvania University, introduced the use of bromine as an accelerator. He had made many experiments with bromine, and succeeded in obtaining instantaneous portraits and views in the open air.

EDWARD ANTHONY

inspected the specimens of Daguerre's work exhibited by Professor Gouraud on the corner

of Broadway and Chambers Street in 1838, and conceived the notion of experimenting on his own account. He had then just graduated from Columbia College. His first effort was to secure a camera, but in those days there were no photographic stock dealers, and he had recourse to his own ingenuity to construct one. He procured a cigar-box, which cost him nothing, and made apertures in it for the insertion of an ordinary spectacle lens, which cost him twenty-five cents. With this primitive instrument he produced some excellent sun-paintings. He continued to practice the art as a dilettante during such leisure as his profession as civil engineer would permit. When Ashburton and Webster were appointed Commissioners by their respective Governments to settle the Northeast Boundary controversy, Mr. Anthony was invited by the American authorities to accompany the surveying expedition to act in the double capacity of civil engineer and photographer. The purpose of the expedition was to locate the boundary line of British and American territory. Mr. Anthony made several photographic views of the "Highlands" and other portions of the disputed territory, and which were estimated as invaluable aids in determining that vexed question. This is the first instance of the employment of photography in the service of nations. In 1842 Mr. Anthony entered into copartnership with his brother Henry, and they engaged in the practice of photography as a business. But the firm was dissolved before the expiration of the year, and Mr. Anthony continued the business in connection with a Mr. Edwards. In 1843 Messrs. Anthony and Edwards visited Washington and portrayed the members of the Senate, with the intention of publishing the engraving known as "Clay's Farewell to the Senate." This engraving was regarded as a masterpiece of art, and the fidelity of the portraits evoked universal admiration. The Emperor of Austria and the King of Prussia, to whom copies were presented, bestowed gold medals on Mr. Anthony as tokens of merit. After the publication of this engraving, Mr. Anthony withdrew from the practice of photography and founded what has since grown to be the largest stock house in the world. He had begun the portrait business with a stock of

materials of which the invoice value was less than a hundred dollars, having bought out Mr. S. Broadbent, formerly an operative in the employ of Morse, but who is now engaged in portrait painting. Mr. Anthony still retains the original invoice, as a record of his modest beginning. This gentleman is among those who have most contributed toward the advancement of photography in this country. Inspired by the enthusiasm of the artist, his connection with photography has not been of a mere mercenary character, but a labor of love.

HENRY T. ANTHONY.

The name of this gentleman is prominently identified with the history and progress of photography in this country. His connection with the art dates back to its introduction in the United States. He associated himself with his brother Edward in the portrait business, but subsequently withdrew and devoted his attention to other pursuits. After Mr. Edward Anthony had established the stock business, he was rejoined by his brother Henry, and the firm has been since known as E. & H. T. Anthony & Co. The subject of our sketch was the first to take instantaneous pictures, not only in the United States, but in the world. This is the highest attainment of the art. He also invented the valuable process of fuming sensitive paper with ammonia, thereby rendering the printing process much more certain and economical. He also recently introduced the use of alum as a component of the silver bath. This has reduced the printing of photographs on albumenized paper to almost absolute certainty, besides accomplishing greater economy in the use of gold and silver. This discovery he freely gave to the profession, who have repeatedly testified their grateful appreciation of this generous act by overwhelming him with thanks and written testimonials. The National Photographic Association of the United States also awarded him the silver medal for effecting the greatest improvement in the chemistry of photography for the year 1870. Mr. Anthony is constantly experimenting on his own suggestions, and likewise tests all innovations which are broached in the various European journals. He is an exceedingly close observer of minute chemical effects in connection with the pho-

tographic business, and has acquired a world-wide reputation for the acuteness of his judgment in this direction.

ALBERT S. SOUTHWORTH AND JOSIAH J. HAWES.

These gentlemen formed a copartnership in 1848 for the practice of photography. This union was productive of many valuable fruits. Among the more important may be mentioned the invention of the "swing-polishing-plate-holder." In the spring of 1846 they daguerreotyped the sun in the course of an eclipse, using the object-glass of a telescope as an aid; the pictures were pronounced of surpassing excellence. They also made some fine daguerreotypes of the moon. Another important contrivance invented by them was an arrangement of triple lenses by which straight lines could be copied, and which was of considerable service to engravers. In 1846-7 they, together, invented a camera by means of which several different pictures could be produced on the axis of the lens successively at different periods. In 1852 they discovered a method of making stereoscopic views so as to avoid all distortion. In 1853 they perfected a grand parlor stereoscope presenting pictures of the dimensions of life. In 1854 they secured a patent for a movable plate-holder which they invented. They also devised a method for softening prints to any degree of mellowness. In 1857 Mr. Southworth originated a plan of photographing disputed handwriting so as to assist in its identification. The legal profession had frequent occasion to avail itself of Mr. Southworth's ingenuity in the settlement of vexed questions involving disputed, obscure, or partially obliterated handwriting. And in Massachusetts the efficacy of photography in dispelling doubts in such cases has been so fully demonstrated, that for several years past Mr. Southworth has devoted his almost exclusive attention in this direction. It is seldom that industry and ingenuity are so fruitful as to yield so many important results in a brief lifetime as it is our pleasure to record in this sketch.

M. B. BRADY.

The name of this gentleman is historic. For many years he stood at the head of his profession without a rival. Mr. Brady was the first who undertook to elevate heliogra-

phy from a mere mechanical process to the graceful dignity of an art. Not only in his own country, but throughout the civilized world, was he recognized as having attained the highest excellence. At home, for seven consecutive years, he wrested the first prize from his struggling competitors at the exhibitions of the American Institute in this city. In 1851, at the World's Great Fair held in London, he achieved the culmination of triumphs and was proclaimed the best daguerreotypist on the planet, and was awarded the highest premium. But however lustrous may be his career as a photographer, and however enviable his position as an artist, it is as a national benefactor that Mr. Brady will live longest and brightest. For upward of twenty years he has maintained a studio at the national capital. He early conceived the idea of securing portraits of eminent Americans. For nearly twenty years he has, with this fixed purpose, portrayed all of our countrymen who have been distinguished in every career. His collection contains, among others, the portraits of the heroes of the Mexican war, of the great Rebellion, and of the departed statesmen who have adorned the past generation, and whose memory will be perpetuated in revered remembrance. To appreciate properly the benefit thus conferred on the nation, we have but to remember how all mankind deplore that there exists no accurate portrait of Washington. What a solace would our countrymen derive from gazing on the very expression worn by the features of the nation's "father" embalmed in living sunbeams! For years Mr. Brady has struggled on without any public recognition of his great services; but during the spring of the present year the Committee on the Library reported a bill in the House of Representatives urging the importance of securing to the country this collection of portraits of the illustrious dead. To use the appropriate phraseology of the Committee's report, "An historical album both of the living and the dead would be a constant source of national gratification, and its locality the very shrine of patriotism." But the services of Mr. Brady are far more comprehensive than in the portrayal of representative men; he has in the very din of battle, amid the carnage and the smoke, snatched the fading scenes

of death, and preserved them in perpetual vividness. The prominent incidents of the battle-field, with its shifting scenery, its pomp and misery, now partially screened by the curtain of smoke, now revealed in all its naked horrors, are preserved as perennial pictures, painted by the same sun which gave reality to the original scene.

F. L. LANGENHEIM

is one of the most enterprising photographers in the country. He is the recipient of several gold medals from European potentates. In 1848 he introduced in the United States the talbotype made on paper prepared with the iodide of silver. In 1850 Mr. Langenheim introduced the stereoscope into this country, and he likewise organized the American Stereoscopic Company. He is recognized as one of the most accomplished of artists. He applied the camera to the production of lantern slides with great effect. He also excels in micro-photography. He has selected Philadelphia for the field of his labors.

ABRAHAM BOGARDUS

is the popular President of the National Photographic Association of the United States. He has held this honorable position for four terms, and, in fact, has been the first and only presiding officer of the Association, his election and re-election not having been opposed by a dissenting voice. His courteous and dignified administration of the affairs of the Association invariably draws forth graceful acknowledgments from the members in the form of a vote of thanks. The formation of this society is mainly owing to the earnest endeavors of Mr. Bogardus. The object of the Association is to form a union of the brethren of the magic art, welded by bonds of mutual interest and amity. Annual conventions are held in some chief city of the Union for the discussing of photographic matters, and on these occasions a commendable rivalry is exhibited by each member in generously donating to the common fund what information he may have acquired beneficial to the art. By this means photography in the United States has become rapidly progressive. The career of Mr. Bogardus has been a successful one in a pecuniary aspect and otherwise. In 1846 he began his business life on the corner of Barclay and Green-

wich streets in this city, with a capital of fifty dollars. He is an example of the successful photographer, having acquired a competency as the fruit of his business, and is now about to retire from the field of action, although not from a participation of the family joys and sorrows. He will still continue his public relations with photography. When he commenced business he employed one assistant, at a weekly salary of two dollars and a half. Now his pay-roll often foots up \$500 for a week. Mr. Bogardus has always stood ready, purse in hand, to aid the advancement of the art or in the protection of its interests. Animated by this spirit, he has on several occasions donated large sums of money for the benefit of photography. We regret that want of space restricts us to such a brief sketch of Mr. Bogardus, but he already enjoys a wide reputation, and has been sketched repeatedly.

JOHN A. WHIPPLE

was born in Grafton, Massachusetts, in 1823. In the spring of 1841 he was associated with Mr. Elias Howe (the inventor of the sewing machine) in the manufacturing of photographic chemicals, at Cambridgeport, Mass. But the enterprise was abandoned as unprofitable, as photography was too young at that time to sustain the business. Mr. Whipple next applied himself to sun-portraiture in Boston, and achieved a rapid success. In 1848, in connection with Mr. Wm. B. Jones, he discovered a process of making negatives on glass instead of on paper, which until then was the material used. The paper negative had many disadvantages, chief among which was that defects were copied on the print. By the new process a combination of iodide of potassa and milk was applied to a glass plate, which when dry was bathed in a solution of nitrate of silver. Messrs. Whipple and Jones are entitled to the credit, we believe, of making the first glass negative in the United States. When they published their method, they felicitated themselves on giving to the world an entirely novel process, but in this respect they were doomed to be sadly disappointed. They were greatly chagrined to learn that a method almost identical to their own had been published a year previous in *Silliman's Journal*, with the exception that albumen, having been found to

be more efficacious than milk, had been substituted for it. They, however, practiced their method with signal success. They soon afterward introduced the use of honey to soften the albumen, which effected an important improvement. In 1853, Mr. Cutting having secured letters patent for the invention of his collodion process, Mr. Whipple combined his patent with that of Mr. Cutting. In 1850 Mr. Whipple daguerreotyped the moon, using for this purpose the great telescope of Cambridge Observatory. This was the first application of the new art to the purposes of astronomy, and some specimens sent to Europe created a profound sensation in circles of science, and evoked the general admiration on account of their artistic beauty. At the World's Fair held in London, in 1851, their daguerreotypes secured a prize. In 1852 Mr. Whipple daguerreotyped the stars of all magnitudes, save those of the fifth. This was considered an extraordinary feat. Encouraged by this unexampled success, Mr. Whipple then sought for new worlds to conquer, and had the presumption to insist on imperial Old Sol making a picture of himself. He made some magnificent daguerreotypes of the sun and its spots. In 1857 he produced the first microscopic daguerreotype. In 1867 Mr. Whipple executed photographs of the solar eclipse at Shelbyville, Ky., under the supervision of Professor Menlock, of Harvard University. On this occasion he obtained one of the best images produced of the sun's corona. Mr. Whipple is established in Boston, where he transacts a most prosperous business. We shall make no comments on the services rendered by Mr. Whipple in promoting the advance of photography. The same display of genius and energy would have secured eminence in any sphere.

GEORGE G. ROCKWOOD.

This sun artist left the editorial profession for photography about sixteen years ago. His efforts have been supplemented by a familiarity with art and his portraiture characterized by a conformity to art principles in a process ordinarily practiced as purely mechanical. He was the first to introduce the *carte-de-visite* in this country, and various other improvements which have been generally adopted. For the past ten years he

has had no rival as a landscape photographer—the American Institute awarding successive premiums at all of its recent exhibitions.

Mr. Rockwood has written some books upon the practical working of his art, and is a frequent contributor to the press. An enthusiast in his art, its advancement and development has been as earnestly sought as personal gain. His establishment, one of the largest and most complete in the country, is at 845 Broadway, and covers the upper floors of several buildings.

F. A. WENDEROTH.

The subject of this sketch is a native of Hesse Cassel, Electorate of Hesse. He received an artistic education, and studied painting with Professor Frederick Mueller at the Academy of Fine Arts in Hesse Cassel. In 1846 he was sent to Paris, under the auspices of this institution, in order to prosecute his studies in the higher branches of art. At Paris he received instruction from Leon Coignet, until the revolution of '48 suddenly compelled him to terminate his studies. In 1849 he came to the United States, and remained in New York city until 1851. During the intervening two years he was engaged in painting pictures for the Art Union. Influenced by a desire to acquaint himself with the resources of our country, he traveled through several States of the Union, and also of Central America, and extended his rambles to the South Sea Islands and Australia. In 1857 he returned to America and selected Philadelphia for his future home. Here he employed himself in painting photographs, and likewise prosecuted experiments in photography. While so engaged he originated the ivorytype, an exquisite style of portrait, which has since become a universal favorite. He subsequently introduced the photo-miniature. Mr. Wenderoth has also invented a photozincographic process, which he proposes soon to utilize. He has acquired considerable reputation as a painter, and one of his best efforts is the painting known as the "Battle of Gettysburg," which has also been reproduced in photography. Perhaps the most important contribution made by Wenderoth to photography is the invention of a new style of picture during the last few months, and which is to be called the "Argento-picture." He has long sought for this

result. The argento-picture combines the virtues of both the daguerreotype and paper photograph. It can be completed and ready for delivery within thirty minutes, whereas in unfavorable weather the daguerreotype may not be perfected in a week. But weather exercises no influence on this picture. It is probably the perfection of brilliancy in combination with delicacy and precision of detail. Brighter than the daguerreotype on account of the lights being formed on a polished metal surface, it is also, like the

photograph, susceptible of infinite reproduction, being printed from a negative. It is as fadeless as the amaranth, can be retouched and tinted, and is not affected by contact with light or fluids. That this is no mean accomplishment is manifest, and entitles the inventor to a distinguished place on the roll of honor. Photography has enlisted in its services, in proportion to its age, a greater number of brilliant intellects than any of its sister arts.

[TO BE CONTINUED.]

Our Country and Its Resources.

That which makes a good Constitution must keep it, viz., men of wisdom and virtue; qualities that, because they descend not with worldly inheritance, must be carefully propagated by a virtuous education of youth.—*William Penn.*

HOMES OF FAMOUS AMERICANS.*

BY LAURA C. HOLLOWAY.

[THE HOMES OF FAMOUS AMERICANS are sources of inspiration to the children of the nation. They are almost sacred in their character, and awaken in the hearts of even the most indifferent beholder a reverence born of respect and genuine sentiment. To God's itinerant children, those of culture and worth, of purity and sorrow, they possess a fascination not to be measured by any but an ideal standard, and never to be described, hardly imagined. HOME, to those who are out in the heat and the storm, struggling and suffering, is a word of powerful import, suggesting deeper peace and more precious rest than comes ever to their kind. But they know its spell, its divineness, and keep bright as an argand light the memory and the harmony it suggests. In presenting this series of sketches, written with the expressed and implied assurance that they were to be issued in book form, it becomes necessary to say that in good time, and after they have been published in this JOURNAL, they will assume a more durable shape and be issued, as was at first intended, under the title of "Homes of Famous Americans."—THE AUTHOR.]

MOUNT VERNON.

LAWRENCE WASHINGTON, the oldest son of his house, and the probable future head of his family, was sent at an early age, as was the custom among the wealthy Virginians of that day, to be educated in England.

He was fourteen years the senior of his half-brother George, and was to him a model and guide. The brotherly affection which existed between them did more perhaps than anything else to influence the future career of the son; and, when later, Lawrence obtained a com-

mission and embarked in the West India expedition, in 1740, George remained at home to act soldier and play commander-in-chief of Hobby's school. The martial spirit of the family was not likely to be lost in this third son, nor was it at all inclined to lie dormant while a member of the household was an actual participant in the stirring scenes being enacted by the troops under General Wentworth and Admiral Vernon.

The capture of Porto Bello, and the siege of Carthagena were exciting themes to the child whose brother was in command of his company in the later engagement, and who expected at the close of the campaign to rejoin his regiment in England and remain a soldier. But the death of his father, Augustine Washington, and his subsequent marriage to Anne Fairfax, decided the future of Lawrence, and doubtless colored the after-life of George, who was now left to his care. He renounced all idea of promotion in the army and foreign service, and settled himself on his estate on the banks of the Potomac, to which he gave the name of Mount Vernon, in honor of the Admiral.

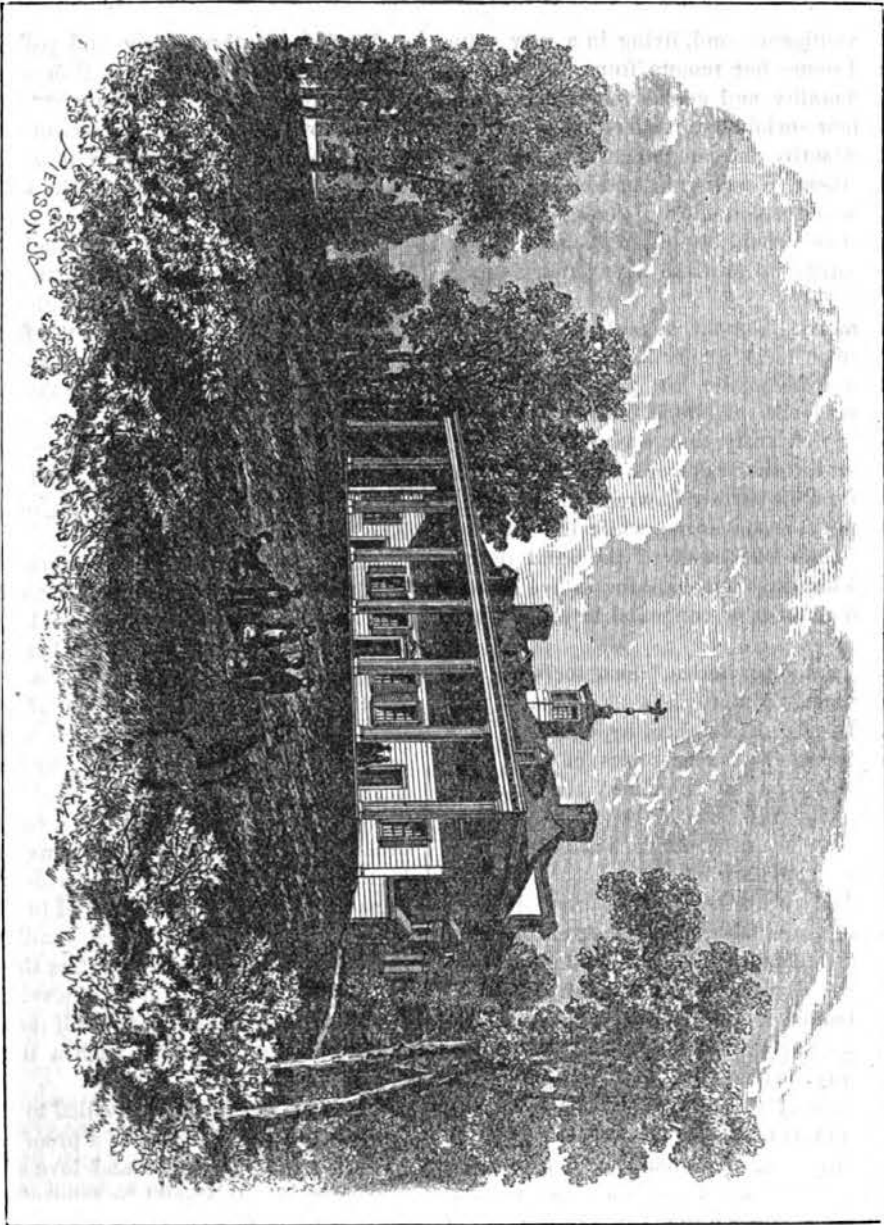
Until his death, which occurred in 1752, his house was the occasional home of his favorite brother, who spent the intervals between his surveying tours in the society of the cultivated people who frequented Mount Vernon. Seven years later this same brother, now Colonel George Washington, conducted his bride to

* (Entered, according to Act of Congress, in the year 1872, in the office of the Librarian of Congress, at Washington, D. C.)

this, his future abiding place.* He had retired from military life and been elected to the House of Burgesses; quiet had been restored in his native province; the contest between France and England for dominion in America had ended, and, fixed in his residence, with an

It was no renunciation of worldly prospects, or sacrifice of ambition, for Washington to retire to Mount Vernon. It was a beautiful retreat in itself, a broad domain abounding in material richness and artistic beauty. His tastes tended to agriculture; his rural life was

Mount Vernon.



agreeable partner for life, he hoped to find "more happiness in retirement than he ever experienced in the wide and bustling world."

* Colonel Lawrence Washington's only child, Jenny, died shortly after her father's death, and Mount Vernon became the property of his brother.

never irksome, for those were the halcyon days of the Old Dominion, when a plantation was a small empire within itself, and where, in the master's person, was represented the pride of aristocracy and the power of wealth.

All about the country were situated the

houses of his opulent neighbors, who vied with each other in that free-handed hospitality which has long since faded away. Chariots and postilions in livery were common in Virginia, while yet the other provinces were wildernesses. Descendants of the nobility of the old country, these planters had introduced into their adopted homes all their luxurious habits, their intelligence, and, living in a new country, and somewhat remote from one another, their liberality and genial manners, coupled with their sociability, rendered a home near them attractive and altogether enjoyable.

Like them, Washington had his retinue of servants and splendid equipages, and all that foreign lands could supply in the way of luxuries contributed to make his existence agreeable.

His marriage, from a material point of view, must have reconciled him to his retirement from public life, particularly as he had abandoned all hope of attaining rank in the regular army, and was in poor health. His own fortune was considerable; that inherited from his brother Lawrence consisted of the Mount Vernon estate, while the addition of more than one hundred thousand dollars from his marriage enabled him to live in that dignified manner so congenial to even Washington.

"No estate in America," he observed in one of his letters, "is more pleasantly situated than mine. In a high and healthy country; in a latitude between the extremes of heat and cold, and on one of the finest rivers in the world." To this beautifully situated home, the future Mecca of America, he conducted his household in the spring of 1759.

The planters on the Potomac carried on an immediate trade with England; their children were mostly educated there, and the frequent presence of British naval officers in American waters tended to keep alive the deep-seated attachment the Virginians entertained for the old country. Hence the houses and grounds partook largely of English taste, and Mount Vernon, in this respect, was no exception. The high wainscoting and broad, open fire-places within, and the small windows and narrow doors without, were essentially English, while the green lanes and flower gardens were home-like in their resemblance.

The lawn in front of the house spread away toward the river, while the orchard in the rear was redolent with the perfume of apple and peach tree blossoms. Farther away the wood-lawn region was the favorite haunt of innum-

erable songsters peculiar to that section of country, while the coverts of the distant forest were the haunts of the deer, and the hiding-place of foxes. The whole region of country along the Potomac, from Mount Vernon to Belvoir, and even beyond, was a grand hunting-ground, over which Lord Fairfax often came from Greenway Court to enjoy a chase.

Virginia, in those early and palmier days, was an outpost for the English aristocracy, where younger sons and numerous poor relations were secured all the places of profit and power, and the society was more exclusive and cultivated than in any of the other provinces.

When a vessel landed from England in the Potomac, all the neighborhood turned out to welcome the officers. Washington, in his diary, speaks of a paroxysm of festivity, "into which his neighbors were thrown by the anchorage of a British frigate in the river, just in front of the hospitable mansion of the Fairfaxes." The commanders, officers, and midshipmen were honored guests, and the hospitality of that most hospitable region was lavished upon them.

The equipages of the family were, like those of all their friends, imported from England, and were of the most costly and cumbrous style. In the latter years of her life, Mrs. Washington always rode in the coach ordered by President Washington soon after his arrival in New York. This coach was drawn by four, and on grand occasions by six, splendid horses and attended by outriders. The body and wheels were of a light, creamy shade, ornamented with gilt, and the arms of Washington were emblazoned on either door. Venetians blinds, front and back, and in the upper part of each window, afforded ventilation and excluded light. In warm weather the curtains could be rolled up all around, leaving the interior quite open, but we doubt if the dignified occupants ever permitted such a thing to be done.

Attention has often been called to the costly equipages of Washington as a proof of his excessive, aristocratic pride and love of ostentatious display. It should be remembered that the weight of these chariots required the combined strength of several horses, even over good roads, and that the light, cheap vehicles of the present day were unknown a hundred years ago. It is related that the builder of this celebrated carriage of Washington's came over and settled at Alexandria, and was justly proud to be told by its illustrious owner that

not a nail or screw had ever given way, although it had traveled, not only through the most of Virginia, but the entire length and breadth of the land.

Mount Vernon's close proximity to the water afforded opportunity for aquatic displays among the rich planters who resided along the banks, and in pleasant weather their beautiful barges glided in and out the inlets, and under the shadow of the willows which drooped their graceful boughs over the water's edge. In the summer afternoons and evenings gay parties of friends and neighbors sailed over the blue waters, stopping now and then to receive a new recruit, or to chat with the occupants of other barges. Until the twilight had succeeded the gorgeous sunset, would the music of the oars be heard, and often before the gay party from Mount Vernon could reach the rise of the hill, the moon would be high in the southern sky, throwing a mellow light over the entire view. What a picture of enchantment it must have seemed to the happy hearts who enjoyed it! Hill-top and valley, lawn and forest, casting wierd shadows, while, above all, myriad stars twinkled in the sky, and the white outline of the house was seen from the water's edge, looking in the moonlight like a sentient thing of life.

Washington loved Mount Vernon, and life there with his wife, adopted children, and friends, was rather to be chosen than the career of a public man. His heart was not warm in its affections, but he cultivated all the amenities of social life, and rendered his home one of the very happiest ever known. No husband was ever more thoughtful of a wife's comfort than he, or ever tried to adorn and embellish a residence to gladden another, as he did Mount Vernon for Mrs. Washington. He was not a man to be engrossed in the pleasures of society, nor yet was he unsocial, but it was his preference to be away from the great throng, and alone with his forest trees and his flowers. As he grew older and threw off the cares of public life, he became more fond of agricultural pursuits and the management of his large estates, into the details of which he carried all his characteristic industry, precision and system. As a statesman and a soldier, he had learned the magic of method, and with it he worked wonders all his life.

On the 9th of March, 1797, General Washington set out for Mount Vernon, a private citizen. A few months previous, when, for temporary rest and relaxation, he retired to his home, it was to plan for this final step, and, in

the seclusion of his library, completed his "Farewell Address," the crowning effort of his life, his country's legacy of immortality.

Now the work was completed, and joyfully he left Philadelphia, accompanied by his wife, his grand-daughter, Eleanor Parke Custis, and George Washington Lafayette, to amuse himself in rural pursuits and to enjoy the society of friends under his own vine and fig tree, as "he did not think it probable he should ever again go twenty miles from them."

Mount Vernon at this time was at the zenith of its beauty. The mansion was in thorough repair, and the many ornaments and elegant gifts sent by admiring friends from every part of the world, adorned it, together with much of the furniture that had been used in the Presidential mansions in New York and Philadelphia. About the walls hung rare paintings and portraits, and on the tables and mantles were busts and medallions of noted characters, and everywhere were evidences of refined taste and generous expenditure. In the garden and conservatory were rare exotics and tropical plants. Fields were rich with grain, and the orchards laden with fruits. Over all this domain Washington kept a watchful eye, and busied himself in adding beautiful drives, ornamental buildings, and improving, in every conceivable manner, this already splendid country-seat.

Very different was the place now from the plain, though substantial, dwelling Mrs. Washington had entered as a bride thirty-nine years before. Under the guidance of her womanly influence, and aided by worldly wealth, Mount Vernon had become in reality a place of classic beauty, while its owners' fame rendered it at that time the most renowned place in the world. Strangers flocked there in countless numbers to render homage to the great chief; and when, a year later, rumors of another war startled the country, and every eye turned instinctively to Washington as their leader, it became a temporary headquarters for army officers and statesmen congregated to consult their commander-in-chief.

The beautiful promise of a serene old age was denied the great man, and the year 1799, the last but one of the century, drew to a close. The first of December came and went, and the ides of the month found him at the end of his earthly journey and entered upon the rest that remained. He was dead, and a shadow had gathered over the grand old home which time has not dispelled.

Two years later, the lonely wife and sorrow-

ing widow was laid beside her husband, and the now deserted house passed into other hands. As Mrs. Washington, up to the close of her life, conducted Mount Vernon on the same hospitable and liberal scale as her husband had done, so likewise did the inheritor of his uncle's name and home, and to it the great and the good of every clime journeyed to do honor to the memory of the immortal Washington.

Of all the innumerable instances of great and noble deeds of women, and in the very many grand and tender ways in which they have testified their appreciation of their social condition in this country, no one act is more replete with honor than their purchase of Mount Vernon.

Since the waves of old ocean echoed back the music of the *Pinta*, the *Nina*, and *Santa-Maria*, as their sails swept proudly over its untrodden path, and the humble ambassador of a Spanish Queen claimed this western country in her name, the condition of woman has been steadily and hourly improving, and year by year, as she has grown and developed and marked the generous applause with which her slightest merit was recognized, has she desired to return in some way the gratitude she experienced.

The opportunity came, when, after half a century and more of progress and prosperity had passed over the Republic, and the garnered wealth of a continent been scattered broadcast over the world, and the term American became a synonym of reckless extravagance and prodigal wastefulness, it was asked that the broad acres of Mount Vernon might become the nation's property.

In an hour of deep humiliation and sorrow—when the last of his name saw slipping from him forever that place of holy memories, and the eye of the greedy speculator glared upon its picturesque beauty—it was rescued, not by a grateful government, but by women; and surely one return was made to Isabella for her generosity, and the interest on the mighty debt paid, when the mothers of America bought the home and grave of Washington.

Mount Vernon had borne its name and honors one hundred and sixteen years, and during all this time had been owned and occupied by a Washington. For more than forty years after the death of his brother, General Washington resided there. Mrs. Washington was succeeded in the possession of the estate by Bushrod Washington, who, for a period of twenty-seven years, kept the house and

grounds as his illustrious uncle left them. John Augustine Washington succeeded him, and after his death and that of his widow, it became the property of its last owner, John Augustine Washington.

It came down to him an ancient and honored heritage, with the glory and fame of more than a hundred years clustered about it. But it came with age and decay written upon its battlements, and marked by many a ruthless ravage of time. Modern vandalism followed in the wake of years, and was fast divesting it of even the charm of antiquity. In such a state he received it, and when, at last, the destroying element of fire partly completed the desolation of Mount Vernon, and the old vault under the hill was entered, and an attempt made to carry away the bones of Washington, it was felt that something must be done to rescue the place.* In 1859 it passed into the hands of the *Ladies' Mount Vernon Association*, and is to-day, through the instrumentality of noble women, and the co-operation of generous men, the property of the nation.

The Mount Vernon of the past we have considered. To-day it stands the picture of hopeless decay. Long disuse, and the desolating influence of civil war, have left it a wreck—a few relics yet remain in the empty old house, but aside from the key of the Bastille, the once beautiful Italian marble mantle, now encased in a net-work of wire, and yellow with age, and the general appearance of the quaint wainscotted apartments, there is but little to be seen. The many articles of personal property, and the furniture, have, years and years ago, been scattered among the descendants of Washington.

But to live over in feeling the great long ago; to bring vividly before the mind's eye the Mount Vernon of the past, and to forget the mighty changes which eighty years have wrought, it should be seen by night. A ride from Alexandria any pleasant afternoon, along the lonely, unfrequented country road, will not fail to produce a mournful sensation, and one that will heighten the effect the place will naturally produce. The road is through a thinly-populated country, which bears the impress of age and want of thrift. To cross the river at Washington, leaving behind the busy crowd of strange faces and constantly-shifting scenes, and travel the lonely lanes of Virginia,

* The coffin of another member of the family was opened, and the remains taken by mistake, but the robber was caught and the bones restored to their resting-place.

is like passing from one country to another, and that other a burial ground of the past. No sound of the mill or factory is there; no young life; no enterprise or even promise of future improvement. Rent from her past idols, unrecovered from the blow that crushed her pride, Virginia is not yet prepared to open her grand domain to the mechanic or the artisan. A few more years of rest and inactivity she claims, in which to mourn over the decay of her great homes and the poverty of her gifted children; then perhaps the awakening will come, and the new era dawn upon that beautiful land.

But in the coming changes much that is beautiful will be lost, much that belongs to the past. A world of memories is there now, and to become imbued with them, and to rightly receive impressions that should be lasting, this oldest and most famous of American homes should be seen in the quiet light of a Southern night. It is then that the harsh outlines and sad ravages are toned down or hidden from sight, and all the landscape wears a mellow tint that well accords with the feelings it engenders.

Leaving the road, deep-rutted and rendered almost impassable, we enter the avenue leading to the western front of the house. The garden walls on either side are high and covered with a green moss. The ruins of the conservatory, and the presence of the two tall chimneys standing erect as sentinels render this once handsome entrance a sad spectacle. Not a sign of young life is there, not even the barking of a dog to break the stillness of the night. The old keeper totters to the gate to see who intrudes, and, permitting an explanation, and a stipend for his guidance, bids his unseasonable visitors welcome. All is silence as we pass the old lodges and look over the walls to catch a glimpse of the flowers blooming there. Alas! the bramble and brier bush grow side by side with the sweet tea rose, and it is hard to discover the presence of even the wild jasmines, save by their perfume. The picture is complete; shadowy twilight and ruins, and in the light of one, and not far from the other, we see the house of memory! It is a touching scene. Age is written everywhere; the sacred precincts seem mute even to insensibility, so oppressive is the deadly stillness. In very truth, the old keeper and the place looked coeval.

Mount Vernon is a mournful sight, even by moonlight. The paint has long since disappeared from the house; the windows are al-

most guiltless of glass, and the shutters are no less discolored and out of repair. The once splendidly cultivated plantation is now almost a wreck, and even the glory of the hills has departed forever. In the moonlight, falling tenderly upon all the landscape, we may see the summer-house far down the cliff, looking picturesque in its eyrie position, hanging, as it were, over the waters below—and we might never know that what appears so fairy-like in this unsteady light is but the mouldering remains of what was once a thing of beauty. Out on the lawn, that spreads away in the direction of the river, the house stands, looking indescribably lonely and silent. An old owl is disturbed by the unusual sight and noise, and complains to his mate. A partridge near by utters a responsive wail, and this is answered by a wakeful warbler in the neighboring woods. Far down below the voice of the river is heard as it goes murmuring to the sea, whispering in its passage the old refrain, "Men may come, and men may go, but I go on forever, forever."

Under the hill the dogwood blossoms are bowing and swaying before the gentle breeze, their multiplicity of snowy petals recalling to mind the legend of the White Lady of the Forest.

The soul is awakened even to inspiration under the influence of the hour, and in the solitude the heart grows as tender and passive as a child's. The impressive associations of the place, and the pure, lambent light of the moon and stars upon the scene, produce a feeling of reverence in harmony with our higher nature. The shell of worldly selfishness and personal interest is forgotten, and in the presence of yonder tomb the heart runs over with silent reverence, until the place becomes religion, and we grow to be devout worshippers.

The immortal fame of Washington draws thousands every year to gaze upon his home and grave, and it is pleasant to know that the majority who make this pilgrimage go to worship at the altar where domestic happiness combined to exalt the manly virtue, and strengthen the womanly graces of the husband and wife who called it home. From this spot radiated an influence that went far toward uniting the faith and hope of the people in those early days of doubt and darkness. French infidelity and licentiousness in the beginning threatened to sap the foundation of the very superstructure French arms were endeavoring to sustain, and none recognized the poisonous influence more speedily than the

chief himself. Liberty was the countersign of the enthusiastic Frenchman, and the watchword of the enfranchised colonies. One meant license, the other release from bondage. One expressed selfishness, the other interpreted the rights of a nation. At such a time, the most momentous one in the history of our country, it was well that a man of Washington's character guided the helm. His personal purity and domestic life were a tower of strength, not only to himself, but to his countrymen, and it is this recognition of his social traits, and the power such qualities possess over the minds of the people, that makes Mount Vernon to-day a shrine.

If there is a lurking suspicion of the ultimate triumph of goodness and genuine greatness in the souls of men or women, let them go

there and mingle with the throng that passes before that tomb every day. It is not to Washington the conquerer they render homage, but to Washington the useful citizen, faithful husband, and pure-hearted man, whose fame is deathless, and whose character will, in all ages, lead coming generations to love his righteous memory and guard as holy ground the place he loved so well.

PETER CARTWRIGHT, the venerable Methodist minister, celebrated his eighty-seventh birthday on the first instant, at Pleasant Plains, Sangamon Co., Ill., surrounded by one hundred and twenty children, grandchildren, and great-grandchildren. He is reported to be more than usually feeble, and gradually failing.

ROCKY MOUNTAIN SCENERY AROUND COLORADO SPRINGS.

THE MINERAL SPRINGS—THE GARDEN OF THE GODS—MONUMENT PARK.

I.—THE MINERAL SPRINGS.

THESE springs, four in number, are situated in the Fountain Cañon, five miles from the town of Colorado Springs. Their local reputation is fast being superseded by a national renown, and during the coming summer no tourist to the Rocky Mountains will consider his trip complete until he has been whirled down the line of the Denver and Rio Grande (the baby railway that is to develop into a narrow-chested but long-limbed and Briarean-armed giant, with one hand upon the mountain's brow and the other upon the bosom of the Gulf of Mexico), tasted of the Galen and Navajoe Springs, loitered in the Fountain Cañon, lingered in the Garden of the Gods, or read the epitaphs of the petrified genii of the under world in Monument Park.

A brief *resumé* of the history of these points of scenic interest may not be out of place in connection with the views we present to our readers in this issue.

Col. A. G. Boone, grandson of the renowned pioneer of Kentucky, Daniel Boone, was the first known white man who visited these now famous Mineral Springs. He camped in their immediate vicinity during the winter of 1832-33 to obtain the curative effects of the waters for his two sons. During his residence there he witnessed at various times the visits paid to these springs by the Ute, Cheyenne, and Arapahoe Indians, who seemed to regard them

with superstitious reverence. Many a wierd incantation, many a wild revel, many a hideous war dance were had by these tribes about the *Great Medicine Spring*. Doubtless they but kept up the customs of their ancestors, handed down to them by oral traditions reaching back into untold centuries, regarding the magical qualities of the sparkling waters. In any event, they never failed to propitiate the Spirit of the Fountain by their votive offerings of beads, wampum, ornaments of gold and silver, knives, strips of cloth, moccasins, arrows, or whatever else they thought would insure a fortunate issue to the plans they had concocted, whether for love or for revenge.

The next recorded visitor was the brave and gallant Fremont, who, in July, 1842, reached the banks of the *Fontains qui bouill*, as he termed it, or *Fontains qui bouille* (Fountain which boils), as it should properly be rendered. He "drank heartily of the delightful water," finding it of a very agreeable taste, resembling the Seltzer Springs at Nassau, and as being "almost entirely of the same character, though still more agreeable, than that of the famous Bear Spring, near Bear River of the Great Salt Lake." He gives in his interesting narrative an analysis of an incrustation with which the water had covered a piece of wood lying on the rock through which it rose; but a later analysis of the water itself, by Dr. Thomas M. Drown, of Philadelphia, is so much more thor-

ough and complete that we append it in comparison with the two most famous mineral springs of Europe:

	Krahuchen Spring, at Ems.	Seltzer Spring.	Galen Spring.
Chloride of Sodium.....	27.25	51.68	36.69
" " Potassium.....		0.85	10.01
Bicarbonate of Soda.....	57.03	29.29	24.01
Sulphate of Soda.....	0.56	0.76	4.78
Bicarbonate of Lime.....	6.65	8.00	15.62
" " Magnesia.....	5.83	7.65	8.89
" " Iron.....	0.67	0.29	

George F. Ruxton, member of the Royal Geographical Society of England, traveling through Mexico and the Rocky Mountain regions four years later than Fremont, thus

effervescence. It was equal to the very best soda water, *but possesses that fresh, natural flavor which manufactured water can not impart.*"

The English explorer camped here for many days, fascinated by the beauty of the hills and the glory of the mountains beyond them. On the one hand was Chiann Mountain, called by Fitz-Hugh Ludlow the "most magnificent mountain in the world." On the other, rose in its majesty Pike's Peak, whose summit as yet the foot of white man had not trodden. Round about him were cañons of rare loveliness, whose wildness enticed him to linger, whose unknown beauties tempted him to explore and publish to the world. "After many days," he patheti-



SITE OF COLORADO SPRINGS.

tersely records his "experience," having during the day brought himself into "a satisfactory state of thirst" by abstaining from drinking and by adding extra salt to the seasoning of his venison:

"I had provided myself with a tin cup holding about a pint; but, before dipping it in, I divested myself of my pouch and belt, and sat down in order to enjoy the draught at my leisure. I was half dead with thirst, and, tucking up the sleeves of my hunting shirt, I dipped the cup into the midst of the bubbles and raised it hissing and sparkling to my lips. SUCH A DRAUGHT! Three times without drawing a breath was it replenished and emptied, almost blowing up the roof of my mouth with its

cally writes, he reluctantly turned his face away from the magical waters.

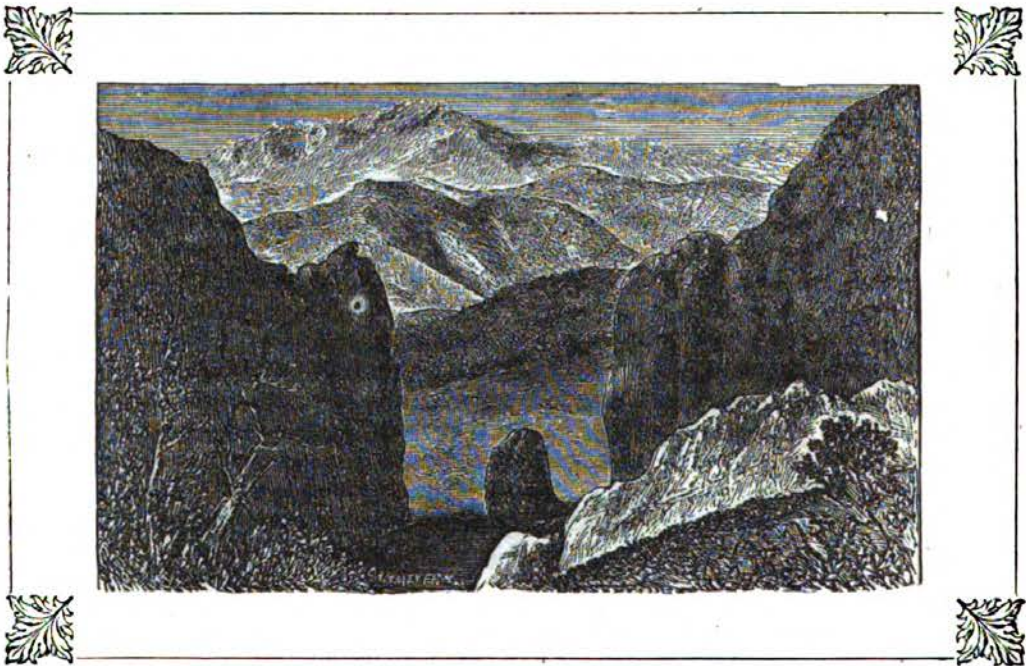
So, too, there have been those who, following his footsteps, have strayed within the emerald interstices of wood and vale; have looked and longed, have lingered and hesitated. The spell of a beauty hitherto unknown has been upon them. The wand of a more than mortal wizard has been stretched over their heads. Eyes that had been blind to Nature were opened to behold her splendor in its pristine purity. They heard voices wooing them as Ulysses heard sounds from over the sea, and they followed the voice of the charmer to scenes ever fresh and strange, to solitudes whose very silence seemed the voiceless music

of Earth, the mother in the nursery of the heart of the continent. The early glow of the morning was transcended by the sublimity of the mid-day scene, and this in turn yielded to the glory of the afternoon as, tasting of the waters of the Spring, they drank and drank and were not satisfied. Nor need we wonder now that savage as well as civilized, Shoshone brave, Spanish hidalgo, English tourist, or American explorer sat and drank of these sparkling waters, finding in them the invigorating, vitalizing essence which Ponce de Leon sought for, but sought in vain.

II.—THE GARDEN OF THE GODS.

Three miles north of the Mineral Springs,

goddess whose charms, heightened by the drinking of the waters of the Springs, caused a revolt among the lesser deities around his throne. The Garden proper consists of a tract of land, a little less than five hundred acres in extent, hemmed in by ravines on the south, mountains on the west and north, and white and old red sandstone rocks on the east, shutting it in entirely from the plains, and having a carriage entrance on the east side about the middle portion, cleft, as it were, through the very rock, called The Beautiful Gate. Looking through this, Pike's Peak looms up in all its grandeur, like a warder grim over an ancient citadel, scarce ten miles away.



BEAUTIFUL GATE—GARDEN OF THE GODS.

and immediately west of and in full view from the town of Colorado Springs, rise the sandstone battlements of the famous Garden of the Gods. Tradition has it that in these same Gardens Jupiter once had an abode. That here he ruled over his kingdom in the eras that preceded his exploits and conquests in the Grecian Archipelago. Even at this day is shown Jupiter's Cave, and, not far distant, the bath where Venus performed her matin ablutions. Be this as it may, there are evidences enough in the gigantic ruins that abound in it to lead us to believe that such a spot as this would naturally have been chosen by his majesty for a summer residence, wherein he could while away the happy hours with the

The rocks are the original old white and red sandstone strata, and by some Titanic upheaval in some far distant era of the geologic world were set on edge, standing vertical with the horizon. The touch of time has worn upon them, cutting them into all manner of fantastic shapes and wierdly beautiful formations. The lover of the beautiful can spend hours within this Garden, with new attractions presenting themselves at every point to which he turns. The eye of the beholder, without the aid of a vivid imagination, takes in the ruins of temples and towers, stately castles with frowning battlements, vaulted niches, and fragmentary cathedral windows; gigantic figures, suggesting eagles of the air, and dolphins

of the sea, old men with white hair, and young maidens with flowing locks, the Madonna and her child, the Genius of Liberty, with eyes looking southward and fingers pointing westward—these, and a hundred equally suggestive shapes, fit themselves to the fancies of the visitor as he wanders amid the statuesque splendors of the scene.

Well could Professor Hayden write, in his report to the Government on the Geology of New Mexico and Colorado: "I know of no portion in the West where there is so much variety displayed. . . . Nearly all the elements of geology revealed in the Rocky Mountains are shown on an unique scale in this locality."

These I found slightly different in composition from the shafts. The conglomerate of the latter was an irregular mixture of fragments from all the hippogene rocks of the range, including quartzage pebbles, pure crystals of silex, various crystalline sandstones, gneiss, solitary hornblende, feldspar, nodular ironstones, gunflint, and rude agates, the whole loosely cemented in a matrix composed of clay, lime, and red oxide of iron. The disk which formed the largely projecting capital seemed to represent the original diameter of the pillar, and apparently retained its proportions in virtue of a much closer texture, and larger per cent. of iron in its composition. These were often so



GROUP OF MONUMENTS—MONUMENT PARK.

III.—MONUMENT PARK.

Monument Park, filled with groups of natural monuments, lies about six miles north of the Garden of the Gods. We quote in this connection an excellent description of them by Fitz-Hugh Ludlow, in his "Heart of the Continent."

"After a protracted examination I found these formations to consist of a peculiar friable conglomerate, which has no precise parallel in any of our eastern strata. Some of the pillars were nearly cylindrical; others were long cones, and a number were spindle-shaped, or, like a buoy, set on end. With hardly an exception, they were surmounted by capitals of remarkable projection beyond their base.

apparent that the pillars had a contour of the most rugged description, and a tinge of pale, cream yellow, while the capitals were of a brick-dust color, with excess of red oxide, and nearly as uniform in their granulation as fine millstone grit."

Thus these mimetic formations of the foothills about Colorado Springs are succinctly described. But pen fails to do justice to these or the innumerable points of scenic interest that cluster in the immediate vicinity. The field opened alike to the seeker after new sights, and the devotee of science is indeed vast. Here are the ample domains of a geologic era stretching into the unfathomed ages of a past beyond our comprehension or present

facilities for research. Books in brooks for the lover of nature; sermons in stones for the scientist. It is but meet and fitting that to this there should be "a fairy tale," over which we linger lovingly, though space warns our pen to hasten to its ending.

The genii of the under world, whose homes were hidden in these hills, were wont to meet, under the moonlight, the fairies of the plains stretching eastward at their feet. This permission had been accorded them by their presiding genii, with but one condition attached—they must return to the under world before the first flash of the dawn was sentineled from the brow of the mighty Peak within whose heart was hidden the Palace of Gold and the Temple of Diamonds, wherein their god abode and they worshiped.

So it was that for many and many a night the moon looked down upon these midnight revels upon the Fontaine Plains. The elves of fairy-land met and danced with their cousins, the genii of the hills; the singers from Rainbow Glen were there; the spirits that dwelt in Queen's Cañon, whose whispers were heard in the twilight about the Naiad's Bath, added the melody of their voices to the wondrous music that floated up the mountain air.

Many and many a moonlight night these elf-dances were continued until one night in June, when—alas! and a-lack!—the music ceased and the dancers came no more; but stretching up and down for miles along the mountain-side the Shoshone chief, as he led his warriors out through *El Paso* to meet his Camanche foe on the plains beyond, beheld strange groups of stone standing where never before had stone been seen. Ebon-hued heads on cream-colored bodies they seemed to him, and for a moment he paused, fearing that the hand of the Mishotunga, or Bad Spirit, was visible in the strange forms before him. But the day passed, and other days followed. The Shoshone chief returned triumphant from the war-trail with many a Camanche scalp attached to his belt. The groups remained, and there they remain unto this day, marking the untimely fate of the genii of the hills, who, intoxicated with the dance, lingered so long after the midnight hour that the first faint ray-flush of dawn, stealing up the eastern horizon, was sentineled from the watch-tower on the Peak ere they had unlocked their arms from the embraces of the lovely elves.

Suddenly transformed into stone, some stand erect as they stood when the fiat went forth;

others half sunk in the ground, betray the eager haste in which they fled to gain their homes before the moment of probation ended.

And ever and ever upon the plains beyond, in the soft moonlight, floats up the sad complaint of the elves, that their cousins of the hills come no more to join with them in the fairy dance.

And ever and ever is echoed back from Rainbow Glen and the Queen's Cañon the sad lament of the singers whose music once made glad the hearts of the merry revelers, doomed to hear that sweet music no more.

As we think the story over—

But stay—the hammer rings, and the saw clicks, and the workmen are busy round the spot where once the dancers were seen. The fairy ring has vanished, and the croquet ground takes its place. The brave-hearted men of the hills meet the fair-faced maidens of the plains, and history repeats itself in a later cycle and in a newer form, and the civilization of a city takes the place of the habitations of the fairies.

But in the heart of these hills the shrines of gold are still hidden; the palaces of silver and the temple of precious stones still remain.

The genius of Colorado forms the crest of her mountains, welcomes the new generation as types of those that are yet to come, when "the hills shall clap their hands together," and the plains shall "bloom and blossom as the rose."

"Roll swiftly, Time, and speed the happy day."

THE GREAT LAKES.—Lake Superior is the largest body of fresh water in the world. Its greatest length is 355 miles, its greatest breadth 160 miles, and its area is 82,000 square miles. Its average depth is from 688 to 1,000 feet. It is 600 feet above the level of the sea, 22 feet higher than Lake Michigan, and 50 feet higher than Erie.

Lake Michigan is 320 miles long, 108 miles in the widest part, and in mean depth 900 feet. In its greatest length it is 390 miles. It has an area of 23,000 square miles.

The greatest length of Lake Huron is 200 miles, the greatest width 100 miles, the mean depth 600 feet, and the area 20,000 square miles.

Lake Erie's greatest length is 250 miles, its greatest width 50 miles, the mean depth 84 feet, and it has a superficial area of about 9,000 square miles.

The greatest length of Lake Ontario is 180 miles, the greatest breadth 65 miles, the mean depth 260 feet, and the area 9,000 square miles.



NEW YORK,
APRIL, 1872.

"A STITCH IN TIME."

CARELESS, slipshod persons leave the bars down, the gates open, the granary unlocked, so that cattle go into the garden, the fields, the orchards, and destroy plants, crops, and fruits; and "thieves break through and steal." A careless cook, on retiring at night, left the water running, and the house was flooded. A blundering hostler, with lighted pipe, let it fall upon the dry straw, setting the stable on fire, and horses, carriages, and other property were consumed. The engineer started the steam, put the machinery in motion, and went to sleep; the supply pipe becoming choked, the water soon evaporated, and the boiler exploded, blowing up the factory and killing many operatives. A broken rail threw the train off the track, and the cars took fire, sending many men, women, and innocent children to a sudden death. A convivial sea captain became "half seas over" in drinking to "sweethearts and wives;" his ship collided with another, and he being unfit to direct matters, all was confusion on board, and old ocean swallowed ship, crew, and cargo at a gulp. Once upon a time, two brothers, North and South, had a falling out on account of a "peculiar institution" and some unoccupied lands which they owned jointly. Brother South wanted to extend his "peculiar

institution," and carry it into Kansas. Brother North was opposed to this, remarking, that in those States where it then existed he had no right to meddle or interfere, but that he objected to its extension upon lands owned by them jointly. Not agreeing on the point, the brothers decided to settle the question by the sword. They pitched into each other pell-mell, and had a hot and heavy fight. During the long contest, mother England was wide-awake for business chances. She said, by her actions, "While the Kilkenny cats are devouring each other, we will fit out privateers, iron-clad rams, and sweep their ships from the seas. We will go in with France and Spain, and when the war is over, divide the continent among us. The Great Democratic Republican bubble will burst, sure, and we will send over one of our numerous princes to rule them. Maximilian shall have Mexico in the interest of France, and I will cut up the United States, giving New England to the Canadas, and establish a monarchy at Washington," and so forth. Thus would be wiped out that "blarsted" braggart, the Great Republic.

Such, in effect, were the motives of many friendly (?) British subjects. Our war was long continued because of British interference, and thousands of lives were sacrificed and millions of property destroyed in consequence.

All this is as palpable to every intelligent American as the nose on his face. When the piratical iron-clad Alabama was fitting out in Liverpool, our Government sent ambassadors to remonstrate against the threatened evil; but Great Britain did not heed our remonstrance. That lawless marauder, with English sailors on board, went forth with fire and sword to burn or sink every American ship she could find. While all this was going on the brave British lion remained in a state of apathetic repose. The war

finally ended, according to the prayers of all good men, but not till after the most terrible carnage and frightful destruction of human life and of property. Brother Jonathan called on Brother John to explain or give an account of himself. At first he was bluff, and denied that he was in any way responsible. But Jonathan, sure of his case in the eyes of all the world, was in no great hurry for a settlement, presuming John would come to his right senses in good time, and offer to settle; and he finally went so far as to say he was sorry, and to confess that he had been to blame, and hoped we would let him off easy. He was willing to pay a little toward the damages he had occasioned, but flew up, and threatened to "back out" of the treaty if we put in too big a bill. John is plucky where there is no danger, and ready to fight when there is anything to be made out of it—say in the East Indies, or in China, or in Abyssinia, or other benighted nations. John swallowed up Scotland and Ireland, and *tried* to swallow America. Will he try again? He sent us a Cornwallis; we returned him a Cob-wallis, with the corn all shelled off. Americans are not a selfish people. On the contrary, they are generous to a fault; but they have the pride of the English, the perseverance of the Scotch, and the fire of the Irish. Besides, with all this there is the steady persistency of the German. Indeed, we are made up of Saxon, Celt, and Teuton; and we count ourselves "some pumpkins." We are no longer children, but adults, and are in a position to demand and to compel justice. We are not belligerent, we seek no quarrel with others, and are resolved to mind our own business, according to the Munroe doctrine of non-interference. England pleads in excuse, or extenuation, that her *Government* did not interfere in our quarrel. We reply, she granted belligerent rights

which caused *us* a world of trouble and expense. This she need not, should not have done. And the letting slip her iron-clad cruisers, she would have us believe was her misfortune, rather than her fault; and here comes in the force of the proverb, "A stitch in time." Had England taken that stitch; had she stopped the Alabama and other privateers, instead of equipping, coaling, and feeding them in her ports, she would not now be on the anxious seat of penitence, seeking pardon, and an escape from the just penalty due to her sins of omission and commission. "A stitch in time saves nine."

WASHINGTON'S BIRTH-DAY.

ON the 22d of February the nation celebrated the one hundred and forty-first birth-day of the "Father of his Country." This is now and ever more to be a legal American holiday, in which this nation will do honor to one of its founders. Our estimate of this central figure in the Union's galaxy has often been given, but will bear repeating. Washington's greatness consisted not so much in bigness of brain, though it was above the average in size, as was also his body, which stood more than six feet high, and was well-proportioned; nor did it consist in intellectual brilliancy—a vivid imagination; nor in extraordinary generalship or fighting propensities. He could not be called a genius, a seer, a saint, or a prophet. How is it then that he has become a nation's idol, and the object of such world-wide admiration? Here are the points of his character:

1. A well-developed body and brain.
2. A well-cultured and thoroughly disciplined body and mind.
3. Temperate habits, with no excess; no enervating self-indulgence; no dissipation; no diseased conditions or in-

firmities inherited or acquired to interfere with the duties of life.

4. The highest integrity, with faith, hope, and charity, was his. From early youth he was trained to be honest and truthful; he was eminently religious, a faithful worshiper, and a godly man.

5. He was dignified; had large Self-Esteem, was steadfast, and persevering; large Firmness gave great application; he had also large Continuity, with sufficient energy and push to give executiveness. He was very prudent—large Cautiousness—and never precipitate or reckless. To sum it up, in brief, we say, he had an even, healthful, harmonious, well-balanced body and brain, with a FULL-ORBED MIND. He was good equally as a farmer, soldier, legislator, statesman, president, accountant, engineer, writer, speaker, poet, musician, friend, neighbor, husband, and fellow-citizen. In each and all positions, he filled the place creditably to himself and acceptably to the people. This is our Washington.

The *Tribune* sums up the comparative measure of his character in these words:

"We suggest that never before could the character of this man, so long foremost of all Americans, be studied by his countrymen with more profit. He had precisely those qualities which, either from climatic or digestive or religious reasons, have grown exceedingly scarce among us. Of brilliant men we have had a fair share, but Washington was not brilliant; of nervous, headlong, desperate chiefs who offered their lives and that of their men as freely as water; Washington knew the value of a private's life and of his own, and took care of both. We have had no lack of rulers who used the Government as mere machinery to lift themselves into more lasting notoriety, or who sat like a polypus in its cave stretching out its feelers on every side to draw food into its maw; Washington was not enriched one penny by the chances which his position gave him—a more creditable fact as he valued money, and acquired it by every honorable means. In short, we have become a dyspeptic, uncertain, ambitious race of politicians; our brains work in flashes of stupor and intoxication; we read a sensational literature, eat, drink, act in a white heat of struggle for place in party or society; our patriotism covers a city or State; the country has outgrown it.

"It is worth our while, therefore, to look

back at this man whose body was six feet two and sound in proportion to its size; who was sober, honest, and pure in his every-day life; had common sense instead of genius; and who, in a plain, practical way, saved his country, and not himself, to the end. This day, when he came into the world, is the best time to consider what capabilities there are in a life endowed with those virtues which we class as mediocre, and the use which he made of them."

That is a fair presentation of the facts and of the man. They are for our instruction and example. We can, if we will, imitate his honesty, honor, temperance, industry, economy, prudence, self-denial, purity, and his observance of religious rites and duties. He was human, not blessed with superhuman powers. A good parentage, a good mother to train and start him on the right track, were greatly in his favor; but he *improved* his faculties, as all may do, and rendered an account for the right use of all the talents by which he was endowed.

Reader, all this is for your encouragement. All that was admirable in the character of Washington will be no less admirable in you!

THE LATE JAMES FISK, JR., AND THE MURDER PENALTY.

THE man whose name heads this paragraph achieved, in a very short time, a prominence [notoriety] in the railway and financial world that has given an interest to the circumstances of his death which his personal merits and character would never have elicited from the public. Our columns are no place for condoning the faults of the deceased by expatiating on his amiability and generosity, nor for homiletics on the scandalous and flagitious vices of which he and, we regret to say, his popularity were very largely composed. Cowardly and wanton assassination has cut him off in the midst of all his notoriety, ill-gotten wealth, and pleasures; and New York, amid the many black deeds that have been committed within her borders, has no greater stain upon her reputation than the murder which has just been committed.

It is difficult to account for the continued existence, in our midst, of so large a number of

persons ready to commit the darkest and most violent crimes upon little or no provocation. The absurd and cowardly habit of carrying concealed weapons has much to answer for in this particular, and the great quantity of intoxicating liquors consumed by a large portion of our population is the chief cause for their production and use on the slightest pretext. But the bravado of the murderer obtains its principal stimulus from the fact that the law is full of uncertainties, that political influence and money have a protective power even under the shadow of the gallows, that, against the most adverse circumstances, a long delay is sure to be accorded to the guilty, and that thus the world may cease to take an interest in the matter, as we have often seen occur in our rapidly changing and effervescent state of public opinion. We are justified in these statements by the events which followed the crime of Foster, who murdered Mr. Putnam on the latter's alighting from a street car. The popular indignation against the dastardly perpetrator of this outrage was very great, and inquest, trial, and condemnation followed its committal with a promptitude which is an integral part of the majesty of the law, and the chief means of prevention of crime. But before the day of execution arrived, the culprit was reprieved by one of the hole-and-corner legal processes which discredit the whole American nation and people; and before long, the murderer, the object of as righteous an indignation as ever animated the public mind, will probably be let loose to prey once more on society. It is by such precedents as that of Foster that crimes like that of Stokes are created and encouraged; and it may require the commission of a few dozen more outrageous villainies to get the popular sentiment on this subject into a condition more permanent and beneficial than a mere temporary frenzy.

It is quite time that some trustworthy system of administration of the laws was introduced into our social affairs. At present, with a vehement outburst of indignation at the time of the crime, followed by utter indifference to the sequel, and with political intrigue, corrupt judges, and monetary influence as complications, the process of the law is less certain and less logical than are the freaks of a gambler's fortune. If the wicked act which we now deplore does something to awaken the people, these lines will not have been written, and James Fisk, Jr., will not have died, entirely in vain.—*Scientific American*.

[Well, what measures do you propose? If

every man who kills another were killed in turn, how many would there be left? Why not abolish that barbarous custom of killing altogether—a custom which society revolts at, and will not carry out—and substitute rigid imprisonment for life? This has been done in several of the States, and works well. Society, through the law, seeks *protection*, not revenge. Shut up the murderers, and give them a chance to repent and reform before they die. Indignation and denunciation are cheap commodities in which fools as well as philosophers may indulge; but to make and administer wise laws righteously requires sound minds, with just and merciful hearts. The question is: Shall we kill, or shall we imprison for murder?

NO INTEREST IN THEIR WORK.

LIGHT and trifling minds do not succeed in life, for the reason that they take no interest in their work. What they do is done mechanically, without thought or care, so that they kill so much time and get paid for it. If they talk or rattle, it is about that which has no sense in it, showing clearly smallness of caliber and vacancy of thought. If girls or young women, they are, or would be, constantly on the "go," and chattering about very little somethings, or about absolute nothings. An hour in *such* company is enough. If it be young men of the same class, the weightiest discussions are on "how to make the hair grow" on their feminine faces, or about somebody's fast horse, fighting dog, or the late runaway match, of two silly youths. One seldom hears from them any reference to the real duties of life or to the work by which they are to get their living. If a target company or a band of street minstrels pass the premises where they "work," all these "light weights" rush to the doors and windows, leaving their duties, it may be, in confusion. Without exhibiting interest in their work, without application, without energy or perseverance, and with no economy as to the way in which they spend their time, is it surprising that their "efforts" are not appreciated by their hard-hearted employer? These eye-servants, these giddy human soap-bubbles, are now "fixing things" for life. They are sowing the wind and will reap the whirlwind. Having "no interest in their work" they will come to naught, and perhaps

assist in filling the poor-houses, asylums, hospitals, and prisons.

REMEDY.—“What you find to do, do it with your might.” Be diligent in business; do one thing at a time, and finish what you begin. Let nothing divert your study of the interest of your employer. Make his interest your interest; he will, in time, if not at first, appreciate and reward your efforts. Be prompt, temperate, industrious, never “in the drag,” always up to time, or a little ahead. Think more than you talk,—read such books as throw light on your pursuit, that you may become thoroughly posted on all matters connected therewith. Attention to these things will call out your faculties, develop your mind, and secure to you a good measure of success in life.

NEW INTOXICANTS.

MULTIPLIED as all kinds of intoxicating drinks are, new kinds are discovered from time to time. Thus we learn that our Canadian neighbors have just distinguished themselves in that particular, as may be seen by the following item, from an exchange:

“Do men gather figs from thistles? No; but the Canadians are making theirs into whisky. The beverage is distilled from the stalks and leaves of the Canada thistle, and is represented to be about thirty per cent. alcohol, and to have a pleasant aromatic flavor. The effect upon the system is very penetrating and exhilarating, ‘the sensation being the same as if a Jew’s-harp in full tune was attached to every nerve.’ Persons who have been played on with Jew’s-harps after this manner will be able to tell whether they would like thistle-whisky or not.”

Well may it be asked: What next? To which the New York *Sun* answers as follows:

“They are again agitating the distillation of spirits from the garbage of cities. Alcohol, it is well known, can be distilled from any thing that ferments, no matter whether the fermenting matter be a loaf of unbaked bread or a reeking garbage vessel. In this new process the garbage is gathered from the houses of citizens, dumped into water-tight vats, boiled for several hours, the grease is carefully skimmed off for soap-making purposes, and the pulpy mass fermented

and distilled. The refuse goes to the corn-field, the peach orchard, or the vineyard. A barrel of garbage yields three pounds of soap-grease and four gallons of proof spirits. The philosophical mind may know that whisky distilled from garbage is as pure and cleanly as that which comes from corn; but for a steady beverage, the ordinary drunkard will doubtless prefer sound Bourbon or Old Rye.”

From another exchange we learn something worse still, which should—while it exhibits the power of appetite, which will have recourse to anything to satisfy itself—lead every temperance man to increased earnestness. Manifold as the evil is, it should be attacked under all its forms, and the fight should be continually carried on, if it is to be destroyed.

“Chloral drinking, according to the physicians, is superseding absinthe, opium, and alcoholic stimulants among the better classes. An insidious sedative, its use grows more dangerously on the tippler than more actively intoxicating drinks. The manufacture of the drug is the best evidence of the extent of its use. In Europe, its production has become one of the leading chemical industries, and it is sold by the ton. Baron Liebig affirms that one German chemist manufactures and sells half a ton a week. The *London Spectator* says: ‘Taking chloral is the new and popular vice, particularly among women, and it is doing at least as much harm as alcohol. The drug is kept in thousands of dressing-cases, and those who begin its use often grow so addicted to it, that they pass their lives in a sort of contented stupefaction. Chloral drunkards will soon be an admitted variety of the species.’”

[Is there really anything in unpervverted natures which requires artificial stimulants for the production of strength of body or power of mind? It is claimed, on one hand, that all nations of men and all savage tribes have something which is an equivalent for our alcoholic liquors, and that *this* is an argument in favor of its use. As well may it be claimed that, because most men are, or make themselves, miserable sinners, that, therefore, it is right to be so. No. That man has fallen, is nowhere more clearly evinced than in his love for artificial stimulants, through which he has become, as a race, so thoroughly PERVERTED.

Quacks in medicine, as well as quacks in theology, have succeeded in contributing very greatly to mislead the people, and have done their part toward increasing the woeful ignorance, dissipation and crime we see all over the world. Mankind is still in slavery to perverted appetite, and subject to that false philosophy which teaches that man may sin and not suffer.]

We earnestly entreat every young man after he has chosen his vocation to stick to it. Don't leave it because hard blows are to be struck, or disagreeable work performed. Those who have worked their way up do not belong to the shiftless and unstable class, but may be reckoned among such as took off their coats, rolled up their sleeves, conquered their prejudice against labor, and manfully bore the heat and burden of the day.

Department of Literature, Science, Education.

EARLY ENGLISH EDUCATION.

IN these days of common schools and high schools, academies and colleges, it can hardly be imagined how meagre were the educational advantages possessed by our ancestry in Old England. To the early English Text Society we are indebted for the publication of a series of very ancient poems, treatises, and legends, which open up to us in a very vivid way the manners and customs of auld lang syne in England.

From one of these volumes we glean a few particulars of upper-class education. We learn that manly exercises, manners and courtesy, music and singing, knowledge of the order of precedence of ranks, and *ability to carve* were considered more important than Latin and Philosophy. "Aylmar the Kyng" instructs Athalbrus his steward to teach Horn the craft of wood and iron, also to carve, to serve the cup, to sing and play on the harp. We find an illustration of this very practical curriculum in Chaucer's Squire, who, at twenty years of age,

"hadde ben somtyme in chivalrie,
In Flaundres, in Artoys, and in Picardie,
And born him wel, as in so litel space,
In hope to stonden in his lady grace. . . .
Syngynge he was, or flowtyng, al the day. . . .
Well cowde he sitte on hors, and wel cowde ryde,
Juste and eek daunce, and wel purtray and write,
Curteys he was, lowly, and servoyisable,
And carf befor him sadur at the table."

The chief places of education for the sons of nobles and gentry were the houses of other nobles, and especially those of the King's Chancellors, who were educated men, able to read and write and talk Latin and French. This system prevailed as early as Henry the Second's time. It is said of Becket, Henry's Chancellor, "the nobles of the realm of England, and of neighboring kingdoms, used to send their sons to

serve the Chancellor, whom he trained with honourable bringing up and learning; and when they had received the Knight's belt, sent them back to their fathers and kindred. The King himself, his master, entrusted to him his son, the heir of the realm, to be brought up." Sometimes these young gentlemen, though of "the blue blood," found these tutors very hard and severe. Here is an old description of one of these noble tutors.

"For and this curte do gnari,
They must stand all afor
To hold up their hand at the bar,
For all their noble bloude,
He plucks them by the hood
And shakes them by the eare,
And brings them in such feare;
He bayteth them like a beare,
Like an ox, or a bull."

Severity toward children was not, however, confined to the Lord Chancellors. At home, as well as at school, the young people of that age were roughly handled. The Scripture was literally fulfilled. Masters were exhorted by parents to "belash their pupils," if they have not done well, till they will amend. How faithfully schoolmasters acted upon this considerate parental advice, a line from Piers Plowman's Crede will show:

"You mased the boye so sore with beating that he could not speake a worde."

We read, also, of marriageable daughters being "beaten once in the week, or twice, and sometimes thrice on a day." The meek and amiable Lady Jane Grey suffered much at the hands of harsh and unappreciative parents. The only sunshine of her childhood was the presence of her "jente scholemaster," who, to use her own words, "teacheth me so jentile, so pleasantlie, with such fair allurements to learn-

ing, that I think all the tyme nothing whiles I am with him, and when I am called from him I fall on weeping." Lady Jane's tutor—the famous Ascham—was a noble exception to those brutal "scholemasters." Indeed, he wrote a book denouncing the folly of "beating into scholars the hatred of learning."

It is pleasant to contrast with this harsh treatment, which even an Ascham could not soften, the considerate parental love which makes our modern homes vestibules of that Household above, and the wise kindness of the teachers in our schools, which is modeled upon the example of that Teacher who spake as never man spake.

But to return to this system of house training. Not only to Chancellors or competent noblemen, but to Bishops, also, the instruction of youth was intrusted. When one of these Prelates, the renowned Robert Grodsted, of Lincoln, was asked by King Henry "where he learnt the Nurture in which he instructed the sons of nobles," he fearlessly replied, "In the house or guest-chamber of greater kings than the King of England," referring to his Scripture studies in the lives of David, Solomon, and other Kings. There is another memorable saying recorded of Cardinal Morton, under whose roof the childhood of Sir Thomas More was passed. The "wit and towardness" of the youth so delighted the Cardinal that he was accustomed to say to the nobles that often dined with him, "This child here waiting at the table, whosoever shall live to see it, will prove a marvelous man;" a prophecy which was splendidly fulfilled. Cardinal Wolsey was concerned in the education of many of the young noblemen of Henry the Eighth's time. We read that in this reign half the nobility were writing ballads. But their manuscripts were not models of spelling and grammar. Aside from reading and writing, there was little education among the upper classes. Indeed, there was not a very strong love of learning among the gentry of England, as witness the emphatic opinion of one of their number: "I swear by God's body that I'd rather that my son should hang than study letters, for it becomes the sons of gentlemen to blow the horn nicely, to hunt skillfully, and elegantly carry and train a hawk. But the study of letters should be left to the sons of rustics."

Passing now from this system of training in great houses, we find that home or private education must have been going on all over England. Under this head may be included instruction in the houses of Abbots. As an

instance of private tuition, we may mention that Dr. Clement was taken from St. Paul's School, London, and appointed tutor to Sir Thomas More's children. Froude gives us some idea of what the children of the nobility learned in the time of Henry VIII. The course included French, writing, playing at weapons, casting of accounts, pastimes of instruments, pronunciation of English, etymology, and "the native signification of suche wordes as we have borrowed of the Latine or Frenche."

The objections to this system of solitary education did not escape notice even at that early day. Mulcaster, in 1582, condemns the withdrawing of boys from public schools, where a generous rivalry inspires them to work. He recommends both kinds of tuition. This private-tutor system grew out of a silly pride in aping the customs of princes and great nobles. In our own day the same spirit has produced select or private schools, where a few children are taught to be clannish, are often petted, generally ill-disciplined, and are put through a course devised by a single mind, and that not always the most competent. On the other hand, the public school promotes emulation among different classes of children, supplies a positive course of study matured by the most thoughtful, experienced, and traveled educators, enforces a wholesome and impartial discipline, and fosters a kindly relation, if not warm friendship, between those of different social positions, which, whether it be abstractly wise or unwise, is certainly necessary to the safety and well-being of republican society and government. Antagonisms between classes will not do unless one class is able to keep the peace of the realm by the thorough subjugation of the other. One of the best safeguards of our nation is the common education of American youth. The withdrawal of the children of the rich from the public schools naturally enough excites the jealousy and bitterness of the masses. Also the segregation of native-born children into select academies forces the large foreign element among us into a position of isolation, if not hostility. The thorough intermingling of all nationalities, classes, and religions in the school-house and the campus will do more than anything else to foster a true American spirit. Those who have sat in the same forms, studied the same books, engaged in the same sports, and shared the same discipline, must grow up with a friendly interest, if not a warm attachment for each other. On the other hand, caste *would* and *ought* to kill a republic.

THE BEGINNING OF THE UNIVERSITIES.

If we may credit an old legend, the first school at Oxford was established by Alfred the Great. Æthelward, the king's youngest son, together with many young nobles and lads of inferior lineage, were there "instructed in reading and writing both the Saxon and Latin languages, and in other liberal arts before they arrived at sufficient strength of body for hunting and other manly exercises becoming their rank." Intellectual training, it will be observed, was still at an immense discount among the hard-riding and hard-fighting nobles of England. The course of study laid down in the above extract from Asser seems a very meagre beginning of the magnificent curriculum now prescribed in the famous University of Oxford. In 1201 this school was first called a University, and showed a goodly roll of 8,000 students. In 1253 the first College was founded. In 1244 it had already become a corporate body. At this time Oxford is credited with 30,000 students, evidently a "round number" from which it would be well to make some abatement.

Having mentioned the founding of the first, or University College, it may be proper to insert here the list of Colleges which together make up the great University. University College, founded as a school by Alfred, 873; endowed by William of Durham, and becomes properly a College in 1253; Balliol College was founded in 1263; Merton College, founded at Malden, 1264, removed to Oxford, in 1274; Exeter College in 1314; Oriel College in 1326; Queen's College in 1340; New College in 1386; Lincoln College in 1427; All Souls College in 1437; Magdalen College in 1458; King's Hall and Brasenose College in 1509; Corpus Christi College in 1516; Christ Church College in 1526; Trinity College in 1554; St. John's College in 1555; Jesus College in 1571; Wadham College in 1613; Pembroke College in 1624; Worcester College in 1714.

The Halls were founded as follows:

St. Edmund Hall in 1317; St. Mary's Hall in 1333; New Inn Hall in 1438; Magdalen Hall in 1487; St. Alban Hall after 1547.

As early as the beginning of the fifteenth century there was an established rule that every scholar must be a member of some college or hall. Those who simply attended the public lectures of the University were called "*chamber dekyns*." In the University of Paris they were called *martinets*, a word of reproach afterward transferred from the college to the army.

Cambridge acknowledges itself but little

younger than Oxford. It claims, but unfortunately on poor authority, to have been founded by Edward the Elder, the son of Alfred. It, however, gained the title of University in 1223. Its Colleges, and their dates, are as follows:

St. Peter's, in 1257; Clare Hall, in 1326; Pembroke, in 1347; Caius, in 1349; Trinity Hall, in 1350; Corpus Christi, in 1351; King's, in 1441; Queen's, in 1446; St. Catherine's Hall, in 1473; Jesus, in 1496; Christ's, in 1505; St. John's, in 1511; Magdalene, in 1519; Trinity, in 1546; Emmanuel, in 1584; Sidney, in 1598; Downing, in 1800.

In the early day of both Oxford and Cambridge the generality of the students were poor men's sons. Archbishop Whitgift distinctly says: "[The Colleges at the Universities] were created by their founders at the first onelie for pore men's sons, whose parents were not able to bring them up unto learning." "The cost," says Froude, "of supporting them at the Colleges was little, and wealthy men took pride in helping forward any boys of promise. But the nobility, and even royalty itself, were not unrepresented in these "charity schools." Edward the Black Prince and Henry V. were students of Queen's College, Oxford. Cardinal Wolsey was at one time tutor at Oxford, and had under his charge several scions of noble houses. Lord Essex, one of the favorites of Queen Elizabeth, was at Trinity College, Cambridge. Also the Earls of Worcester and Cumberland, Lord Dunboy, of Ireland, and Sir Nicolas and Sir Francis Bacon. Archbishop Whitgift was connected with Pembroke Hall, Cambridge. Sir Philip Sydney was educated at Oxford. We might continue our list until it embraced a multitude of the most illustrious names in England; but notwithstanding this noble patronage the Universities for a long time drew the great mass of their students from the yeomanry. The provisions for the support of these poor scholars were not, however, very liberal. We learn from Wood's Annals, that "in 1214 the Commonalty of Oxford agreed to pay fifty-two shillings yearly for the use of poor scholars, and to give one hundred of them a meal of bread, ale, and pottage with one large dish of flesh or fish every St. Nicholas day." In 1461 the Chancellor of England licensed the students of the Universities as street beggars, and they were compelled to "go begging with baggs and wallets, and sing *Salve Regina* at rich men's dores." Thus were poor students forced to eke out a miserable support by begging. It is true they still held the endowments originally meant for them, but in course of time

the sons of the rich crowded into the Universities and gradually "scrouged" the poor scholars out of their rights. Then, as now, "poor men are easily supplanted by the rich, the weak by the strong, the meane by the mighty."

Whitgift says, "So farre has this inconveniencespread itself, that it is in my time an hard matter for a pore man's child to come by a fellowship, though he be never so good a scholer and werthie of that roome." These wealthy students brought far less honor to their Alma Mater than their poorer brethren. Lacking the spur of poverty, and secure of their future, they stood "upon their reputation and libertie." "They ruffle and roist it out, exceeding in apparell and hanting riotous companie, and for excuse, when charged with breach of all good order, thinke it sufficient to saie that they be gentlemen." If history repeats itself, we are living over, in our colleges, the early years of Oxford and Cambridge. In spite of generous endowments, it is no easy matter for a poor boy to maintain himself in one of our great seats of learning.

The age at which students were admitted to the Universities varied from time to time. In an old poem of, say, 1480, the age of admission seems to be put at twenty:

"In age of xx. yeer,
Goo to oxenford, or lerne lawe."

In 1612 we find that boys of fifteen are received. Of the studies pursued after Oxford and Cambridge became regular Universities we have no minute information. In the sixteenth century there seem to have been in Oxford five professors and readers, "that is to saie of divinitie, of the civill law, physicke, the Hebrew and the Latin and Greek tongues." There were also lectures upon philosophy, logic, rhetoric, and the quadrivials or arithmetic, music, geometry, and astronomy.

For a long time Latin alone was taught. Erasmus was the first teacher of Greek in Cambridge; Vitellius, in Oxford. As late as the reign of Henry VII. nothing was taught in these famous Universities besides Alexander's *Parva Logicalia*, the *Axioms of Aristotle*, and the *Questions of John Scotus*. In process of time mathematics came in for a share of attention, and finally Greek.

FOREIGN UNIVERSITY EDUCATION.

The habit of sending young Englishmen abroad for their education began very early. In the beginning of the twelfth century we find an English set of students in the University of Paris. Among them we meet with such names as John of Salisbury, Thomas à Becket, and

Alexander Neckham. It may be added that these noble English youth maintained right well the honor of their native land. An early historian says: "The English, in particular, were so numerous that they occupied several schools or colleges, and made so distinguished a figure by their genius and learning, as well as by their generous manner of living, that they attracted the notice of all strangers." Describing a stranger's visit to the Paris schools, a contemporary poet says:

"The English most attract his prying eyes,
Their manners, words, and looks pronounce them wise.
Theirs is the open hand, the bounteous mind;
Theirs solid sense, with sparkling wit combin'd.
Their graver studies jovial banquets crown,
Their ranking cares in flowing bowls they drown."

Montpellier and Padua, as well as Paris, were noted resorts of British youth.

Our account of Early British Education is not complete without a brief notice of Monastic and Cathedral schools. The "Religious Houses," including cathedral and collegiate churches, abbeyes, priories, colleges, hospitals, preceptories, and friaries, were, from the beginning, "schools of learning and education." Every convent had one or more persons appointed to teach, and the children of the neighborhood might learn grammar and church music without charge. In the nunneries, young ladies of both the upper and lower ranks were taught English, Latin, and *housework*.

An examination of the statutes under which the Cathedrals are founded will show distinct provisions for a school department. In the list of Cathedral clergy we invariably find one or two teachers of the boys in grammar mentioned, as well as the number of boys to be instructed. These masters are to teach the boys to read, write, sing, and play upon instruments; "also their A, B, C in Greek and Hebrew."

Endowed Grammar Schools were chiefly established for citizens' and townsmen's children. The celebrated School of Winchester was founded 1378; Eton, 1440; St. Paul's, London, 1512. The principal studies were Greek, Latin, and "rules of versifying."

It will be seen from this survey that the cause of learning has ever been dear to the English heart. The idea of a common school education continually reappeared. In spite of prejudice of rank and the limited means of those early ages, schools for the people were founded and flourished. Thanks to these schools, "the sons of workmen, if not plowmen, might rule nobles, and sit by kings, nay, beard them to their face." The sturdy and intelli-

gent spirit of the English yeomanry was thus fostered—a spirit which never burned brighter than in the present generation of Britons, and which bids fair, at no late day, to emancipate

England from monarchical rule, and thereby admit the meanest of her peasants to all the educational, political, and religious advantages that the highest peer of the realm now enjoys.

THE ENGINEERS OF THE MONT-CENIS TUNNEL.

IN a former number, as the reader will remember, we announced the completion of this grand triumph of modern skill in engineering; in this we would say a few words in

constructive development, and from the stores of his invention was ready at any time to resolve whatever of perplexity or embarrassment occurred in the progress of the great under-



PORTRAIT OF GERMANO SOMMEILLER.

reference to the master spirits whose names will be ever associated with it—Germano Sommeiller and Severino Grattoni. The former, as is evident in the portrait, had the French type of temperament well marked, and a splendid

taking. Grattoni, whose portrait also accompanies this sketch, appears to be a man of strong will and earnest fortitude. The fine development of Constructiveness shown in the upper side-head proves that his choice of the

pursuit of engineering was something more than a "lucky hit;" much rather, the prompting of organization. A brief review of the careers of these gentlemen is the following;

Germano Sommeiller was born in 1815, of humble parentage, in a little cottage in San Jеоire, Chamounix. At an early age he was sent to the Abbé Ducrey, director of the college of Melan, who, finding the lad somewhat high-spirited and averse to discipline, had the wisdom to humor him on this point, and made his studies as agreeable as such things can be

mind, and determined to become an engineer; but was still so far from appreciating his own talents, that it was as a military and not a civil engineer that he determined to make a start in life. But here a difficulty met him, and in the end decided his career. He could not get his pass, and when it was proposed that he should enter the Engineers as a private, he preferred becoming an engineer on his own account. In 1845 a body of civil engineers was being formed at Turin. Sommeiller was applied to, and was engaged with a salary of thirty soldi (about 30



PORTRAIT OF SEVERINO GRATTONI.

made. From the good Abbé, young Sommeiller went to the college of Annesy to prepare for the university of Turin, which he entered in 1835, being bent at this time on becoming a lawyer. Fortunately, however, he changed his

cents) a day. He soon made his way, and after a time was employed upon railway work, with a salary of a thousand lire (about \$200), and was subsequently sent with Grandis and another engineer into Belgium to execute some work.

Severino Grattoni was born at Voghera, December 7th, 1816. As his brother engineer was nearly devoting himself to the law of his own will, so Grattoni was nearly devoted to the church by the will of others; for the priests in whom the government of his school rested, observing his precocious talents and tenacity of mind, wished to bring him up as one of their own body. This fair dream was brought to an abrupt conclusion. Grattoni had imbibed very advanced opinions, and having spiced one of his exercises with dangerous doctrines, came very near being expelled from the school. The matter was, however, made up, and having concluded his studies, he went in due course to the university of Turin. Still a Mazzinian, the young man left the university in 1847, and was sent by the distinguished astronomer Plana to direct the Institute at Bulla, where he remained four years. He contributed papers to the *Concordia*, the most advanced of Piedmontese journals, being often opposed to Cavour, who wrote in the more moderate *Resorgimento*. But differences of political opinion did not prevent a friendship springing up between the two.

When Count Cavour obtained power in 1850, he remembered his fiery engineer, and consulted him on many public works, more especially on that of piercing Mont-Cenis, with which Grattoni's fame will always be linked. Grattoni himself became a deputy, abated something of republican ardor, and appeared as a staunch supporter of his friend's policy, without, however, losing any of his professional activity and determination. These were now specially called into operation by Cavour's adoption of the long-discussed Mont-Cenis Tunnel scheme, to the study of which Grattoni and Sommeiller and Grandis, now once more in Italy, devoted themselves. Of this triumvirate, Sommeiller supplied the chief inventive power; Grattoni, the organization and perseverance without which all the invention in the world would have been of no avail; and Grandis, a sound judgment, which was of great use in theoretical questions. Of the two subjects of our notice, Grattoni alone lives to reap the full honors of the great work, for just as they had arrived in sight of the end, about a week before the opening of the tunnel, Sommeiller died.

A FRAGMENT.

BY W. C. BIRB.

THE tones of the night-winds sigh round me now:
'Tis Nature that speaks and tells the decay—
Of affection, of friendship, e'en love's earnest vow,
Like the hues of the rainbow, they are fading away.

Fading away! How sad is the strain!
The angels their essence will surely recover,
And singing, ascending, receive them again,
And the mercy of God will embalm them forever.

Now meekly I go to my rest-giving couch,
And dreaming of friends as the night hours wane,

The angels shall gently, with magical touch,
Awake into life the sweet mem'ries again.

Sweet memories of life, that have faded and gone,
Ties that are broken, joys that are past—
'Till they stand in their beauty and symmetry lone,
Impressed on the heart as real at last.

Then the fairies will dance and flowers will bloom
In the circle the spirits have made,
And beauty and brightness resplendently loom
In the dead of the night, and the depth of its shade.

ANCIENT GREEK MUSIC—ITS RELATION TO MODERN MUSIC.

BY A. J. GOODRICH.

THE subject of ancient music, particularly that of the Greeks, has been a matter of disagreement among certain historical writers for many years. Several gentlemen of erudition imagine they have discovered the secret of the Grecian modes, and that they form the theory of all music. These gentlemen even go into such ecstasies over their resurrected musical enigmas as to ignore the sublime harmonies of Hayden, Mozart, and Beethoven, and they seem to think their mouldered manuscripts and hieroglyphical inscriptions should be im-

mediately stereotyped and published to the world instead of those abstruse compounds we are wont to hear.

But after writing an ancient hymn in four or five different modes, and then applying the modern improvement (?) of harmony to help the thing out, they even then disagree as to the manner of arrangement, or the significant theory of their really curious examples. If there ever was any theory to those characteristic modes, it seems to have been buried forever in the ruins of Grecian glory—to have

vanished with the mysterious spirits of their fabled gods. At least these enterprising speculators have furnished no conclusive evidence of what the theory was, and have nothing but assertion to support their belief in the singular charm of this singular music.

But the events of history, from the rise to the fall of Grecian eloquence, dispute the existence of any such music as would compare with ours. From Greek history we learn that their music was either performed on such instruments as the lute, lyre, harp, timbrel, trumpet, or flute, or sung in unison; harmony, it is evident, being unknown to them. On public occasions they were accustomed to assemble at their market-places, or in their temples, and offer hymns, odes, and harangues to their mystical gods and goddesses, or certain illustrious public persons.

Some of their instruments had many strings and stops (or frets), and these were tuned with tolerable correctness, thus enabling the performer to produce different sounds. They had also several species of modes emblematic of certain sentiments, besides lines, notes, technical signs and terms, durations of time, etc. No bars for the division of time were used, however, and their ideas of rhythm seem to have been anything but musical. Music can have little meaning without rhythm (proportion and division), and without harmony it must sound vacant, monotonous, and unsatisfactory. The attunement would remain undecided, and no modulation could be definitely effected. In fact, the whole *modus operandi* of their crude and mystical system of music seems to have been lost in the crumbling ruins of that otherwise Augustan age. That the gifted and beautiful Lamia succeeded in captivating her country's conqueror with the aid of her resistless flute is not altogether improbable—and that the gallant young hero was very susceptible to such charms, is also quite possible.

Who knows, however, if the angelic love-lorn Venus may not have sung as sweet and sad a lamentation for the incredulity of Adonis as Beethoven's cantata, "Adelaide"? or whether the moaning of Achilles was not an original Marseillaise hymn? Who can tell if the royal Amphion, who summoned the stones together by the magic of his music, and thus formed the encircling walls of Troy, was not a better performer than Liszt or Gottschalk? or, still worse for us, whether the man who blew down the walls of Jericho was not a more powerful musician than Wagner?

From the peculiarities of Greek modes (each

containing a different order of notes, supposed to represent various sentiments) modern writers have derived some very erroneous impressions. It is now generally believed that each of our different keys represent, respectively, *loveliness, gayety, brilliancy, boldness, war, enterprise, dark forebodings*; that some are "plaintive and sad," others "melancholy, meek, and pensive," while some, particularly, are "uninteresting and dull." It is easy to see how such notions happened to be promulgated. I might, with equal propriety, say that B *flat* is one of the most exciting and interesting keys, because I have heard several very passionate compositions in that key,—though we are told it lacks animation and is "uninteresting." Who will be so ignorant as to suppose that Beethoven would select an uninteresting key for his mass, symphony, concerto, or cantata, in B *flat*?

Any key may represent any situation or emotion, and no such distinctions exist between the various keys as regards the peculiar effect of each individual one. The distinctions arise, not from the nature of this or that key, but from the relationship which it bears to some other key previously heard. It is the affinity, or want of affinity, which exists between one key and any other into which we may go that produces a characteristic effect. For instance, if we are in the key of G, the chord of C will have an opposite effect from that of D, simply because they are related in different ways to the tonic, and while one leads away from, the other naturally leads to, the tonic, G. So the relative minor to the tonic will have a different effect from that of the relative minor to the dominant or subdominant,—and for the same reasons. If we go abruptly from the harmony of G to that of E *flat*, the effect will be quite startling and entirely free from either plainness or persuasion. The key of E *flat* is almost wholly unrelated to G, and the sound of a major third below the tonic must naturally be bold and animating. Then let us go abruptly from G into the harmony of B (five sharps) and a certain majestic effect will be produced, full of determination and loftiness, yet less bold or startling than the change to E *flat*. The reasons are, that we recognize the chord of B as the dominant to the relative minor, and upon examination we find that D *sharp* is the only foreign note, F *sharp* being found in the signature of G and B also as the major third of G. But on the other hand, let us begin in E *flat* and go abruptly into C *flat* or G, and the same effects will be observable

which were remarked in the changes from G to E *flat* and G to B.

The only distinctions which ought to be made in regard to the choice of keys are technical ones; such as the compass of voices, the imperfectness of certain notes on certain

instruments, the convenience of the performer, or the range of the composition. So much for this dreamy, whimsical notion about the individual characteristics of independent keys, which comes from the Grecian theory of their Lydian, Doric, and Ionian modes.

ARE "PRE-ADAMITES FOUND IN THE BIBLE?"

[THE article on "Pre-Adamites," in our February number, has enlisted the serious attention of many readers, if we are warranted in such an inference from the numerous replies and allusions to it which have been received. Some of the discussions of the question, especially those by J. W. S. and "C." are excellent. The following, which possesses the merit of brevity as well as point, and considers the subject according to the commonly received interpretation, is all we have space for at this time.—ED.]

MR. EDITOR—I notice in the February number of your valuable JOURNAL a long article under the above caption, and over the initials of "E. C.," in which the writer claims to have made the discovery that the Scriptures "*as clearly indicates the creation of Pre-Adamites as it does the creation of Adam.*" The character of the Pre-Adamites is claimed to be "human beings like Adam," possessing "physical nature, and natural affections, and mental qualifications, but lacking God-like elements and moral qualities, having no hope and without God in the world." In this condition they were destined by the Almighty to "mingle and marry" the Adamites, who were created in the image of God, possessing moral qualities, and, by virtue of this engrafting, the whole human race would be united to God through Christ, who was to appear in the line of Adam.

The question with me is not as to the character or destiny of the Pre-Adamites, but whether or not the Scriptures teach at all, or even allude to their creation or existence. There is a query in my mind why Mr. E. C., of the nineteenth century, should become the discoverer of this novel theory, if, as he states, it is as "clearly" indicated as the creation of the Adamites. I purpose now to examine the proof of E. C., and if possible catch a glimpse of Pre-Adamite man.

Our attention is first called to the phrase "living creature," in Gen. i. 24. "And God said, Let the earth bring forth *the living creature after his kind* (a complete sentence); cattle and creeping thing, and beast of the earth, after his kind, and it was so." "Verse 25 re-enumerates the creation of beasts, cattle, etc., without

again referring to the living creatures (Pre-Adamites)."

In the above it is claimed that because verse 25 re-enumerates beasts, cattle, etc., without recapitulating "living creatures," that therefore it means *human beings*—Pre-Adamites. What a conclusion! E. C. has surmised that the word *creature* means human being, no more and no less. Permit me to call attention to the definition of the word as given by Webster. "Creature: anything created; any being not self-existent; any being created with life; an animal; a man." You can see by this that it means both man and animal, or anything that has animal life. Such is its use in the Scriptures. It refers to the "cattle and creeping things and beasts of the earth," in Gen. i. 24. See also Gen. ii. 19, "Out of the ground the Lord God formed every beast of the field and every fowl of the air, and brought them unto Adam to see what he would call them, and whatsoever Adam called every *living creature* that was the name thereof." This will now settle that part of the argument that rests upon the term "creature."

The next important item is found in these quotations from the essay of E. C.:

"Cain . . . married a Pre-Adamite woman." "Seth . . . from the very necessity of the case married another Pre-Adamite and had children."

Now, there is no proof to these assertions, but, it is argued, from the *necessity* of the case. The suppressed conclusion here is this: Adam could not have had descendants that Cain and Seth could have married. Our task is simply to show the fallacy of this conclusion. Adam lived 930 years. Cain was the first born (three years after Adam's creation). Seth was born 130 years after the creation of his father Adam. Seth begat Enos, and Enos begat Cainan, and Cainan begat Mahalaleel, and Mahalaleel begat Jared, and Jared begat Enoch, and Enoch begat Methuselah. Perhaps now we are far enough away from the birth of Cain to give E. C. satisfaction. Methuselah was born in the

year of the world 687, and, it is said that he had sons and daughters. Methuselah lived cotemporary with Adam, the father of Cain, 243 years. We do not know how old Cain was when he married, nor when he died; but, reasoning from analogy, we would say that it is perfectly natural for a son to live as long as his father. Therefore Cain conversed with many of the descendants of Adam, both male and female, and, passing over many generations, he could have married Methuselah's daughter.

I would refer E. C. to the study of Bible Chronology, and to the geometrical increase of the human family.

"Who were they who lived in the land of Nod, where Cain went to find a wife?" E. C. says, from the very necessity of the case they were Pre-Adamites. Let me entreat you, Mr. E. C., not to be too fast in drawing conclusions. A little proof right here would be very acceptable. It must be remembered that from the descendants of Adam grew a great many more than those whose names are recorded in Bible history. It is said that Adam had "sons and daughters." Their names are not given (see Gen. v. 4). From these, no doubt, both Cain and Seth could have selected their wives.

Again, "Chapter V. clearly manifests the purpose of God to preserve the genealogy of Adam's family. We see embraced in this genealogy the mixed descendants of Seth and his Pre-Adamite wife." Now, after reading said chapter I notice the genealogy of Adam's family, but nothing is said concerning the "Pre-Adamite wife." How does E. C. know that Seth married a Pre-Adamite? Will he point out the place where she may be found? In order to prove this, it seems to me that E. C. should give us the Pre-Adamite genealogy; but this he can not do, for the simple reason that none exists. To guess that Seth's wife was a Pre-Adamite will not answer for the proof of this proposition, and if the Pre-Adamites are as "clearly" set forth as the Adamites, then proof we must have. E. C. now refers to Rom. viii. 19, "For the earnest expectation of the *creature* (Gen. i. 24) waiteth for the manifestation of the sons of God." I have shown that E. C. has mistaken the meaning of the word "*creature*." Now, he links the *creature* of Gen. i. 24 with that of Rom. viii. 19. The one refers to cattle, fowl, and beasts, the other to creature man, to man's material body, to Adam's posterity, and more especially to that portion of the human race who have submitted to Christ. While Genesis explains

what is meant *there* by the term *creature*, so Paul explains in Rom. viii. 22 and 23 verses what he means by the term *creature*. Says he, "The whole creation (all mankind) groaneth, and travaileth in pain together until now (the Christian dispensation): and not only *they* (the whole creation) but ourselves (Christians) also, which have the first-fruits of the Spirit, even we ourselves groan within ourselves, waiting for the adoption (not of the Pre-Adamites but) to wit, *the redemption of our body*."

I would suggest a little care right here lest my friend E. C. should get up an alliance between man and creeping things, birds and beasts. There is none of this chapter (of which Mr. E. C. has quoted largely) that makes any allusion to his Pre-Adamites. Whatever union is talked of, whether Jews or Gentiles, flesh and spirit, they are unions as such, being joined together by the spiritual relations of the Gospel of Christ, alluding only to the union of all nations, who are "made of one blood" and of one common progenitor.

After having examined the words "Gentiles," "Created," "Creation," "Creature," "Mystery," "Immortality," "Mortal," "Destroy," "Perish," "Giants," "Heathen," "Christ," "Chosen," etc., as directed, I have concluded that my friend E. C. scarcely knoweth their import. The "Emphatic Diaglot Testament" and "Cruden's Concordance," upon which he seems to rely, furnish him no proof of the Pre-Adamites, but to the contrary.

It certainly seems to me that there can be no light furnished to science nor to this age by this novel method of wresting Scripture from its original signification.

Again, we are referred to Gen. x. 5: "By these were the isles of the *Gentiles* divided in their lands." Conant says, "These Gentiles were pagan nations." My friend E. C. says, "The descendants of Adam had not yet become pagan nations." This remark is but a mere assumption. It is one thing to assert and quite a different thing to prove an assertion. If E. C. was permitted to prove his theory by assertions, he would no doubt have it, ere this, well established. But assertions do not furnish much light to this age nor to the sciences of this age. How long does it take for a nation to become pagan? Admitting, for the sake of the argument, that the Deluge was only partial, how does E. C. know but that Adam's descendants were the pagan nations? Indeed, it becomes quite evident, when we admit this, that Adam's descendants, in part, were the pagans referred to; for at the time that the

"isles of the Gentiles were divided," we have the world's history for more than 2,000 years. And is E. C. prepared to show that pagan nations could not become such in that period of time?

But, says my friend, the descendants of Adam "were still a chosen people to become a light to the Gentiles," and hence these pagans could not have been the descendants of Adam. Now, where in all the Scriptures can we find any such an intimation, that all the descendants of Adam were at that time, or at any other time, "to be a light to the Gentiles?"

There is no such intimation. The trouble is this: E. C. has taken a passage of Scripture (Luke ii. 32), which refers to Jesus Christ, and applies it to all of Adam's posterity. Christ was a "light to the Gentiles," but this even was not at the time when the "isles of the Gentiles were divided," but when he came into the world to unite in himself "one new man (church), so making peace,"—"having abolished in his flesh the enmity, even the law of commandments contained in ordinances."

I will not pursue E. C. any further at present, but would say that about every passage of Holy Writ which he has quoted has been made to mean something more or less than was not intended by the writer. DR. E. YOUNKIN.

WISDOM.

WIT does not take the place of knowledge.

REAL greatness does not depend on the things we do, but on the mind with which we do them.

THE mind of man is this world's true dimension; And knowledge is the measure of the mind.

Lord Brooke.

"A LITTLE heaven leaveneth the whole,"—so a large mass of error is easily embalmed and perpetuated by a little truth.

CONCEIT and confidence are both of them odious; the first always imposes on itself, the second frequently deceives others too.

THERE are some great troubles which only time can heal, some perhaps which never can be healed at all; but all can be helped by the great panacea, work.

NARROW SOULS.—It is with narrow-souled people as with narrow-necked bottles—the less they have in them, the more noise they make in pouring it out.

A GOLDEN rule for a young lady is to converse always with her female friends as if a gentleman were of the party; and with young men as if her female companions were present.

No sincere desire of doing good need make an

enemy of a single human being; that philanthropy has surely a flaw in it which can not sympathize with the oppressor equally with the oppressed.

"MATHEMATICS, metaphysics, music, have each its particular organ. Our knowledge does not come but by comparing and judging."—*J. C. A. Peltier to Dr. Gall.*

It is quite the fashion to drop now and then a lump of piety into personal conduct, but too often there is little care to "work in it." A life properly seasoned with grace has a uniform flavor.—*H. W. Beecher.*

MEN's lives should be like the day's, more beautiful in the evening; or, like the spring, aglow with promise, and the autumn, rich with golden sheaves, where good works and deeds have ripened on the field.

"I HAVE lived," said Carroll, "to my ninety-sixth year; I have enjoyed continued health; I have been blessed with great wealth, prosperity, and most of the good things which the world could bestow; public approbation, esteem, applause,—but what I now look back on with greatest satisfaction to myself is, that I have practiced the duties of religion."

MIRTH.

[Under this heading we propose to publish

"A little nonsense now and then; which

"Is relished by the wisest men."]

SOME one with a logical turn of mind wishes to know, if a small boy is a lad, a big boy is not a ladder?

IN too many lamentable instances the "last scene of all this strange, eventful history," according to the newspapers, is kero—sene.

A MINISTER asked a tipsy fellow leaning up against a fence where he expected to go to when he died. "If I can't get along any better than I do now," he said, "I shan't go anywhere."

"WILL you have the kindness to hand me the butter before you?" asked one politely of an ancient maiden. "I am no waiter, sir." "Is that so? I thought from your appearance you had been waiting a long time."

A LITTLE Danbury girl, when asked by her mother about suspicious little bites in the sides of a dozen choice apples, answered, "Perhaps, mamma, they may have been frost-bitten, it was so cold last night." The mother retreated.

Is this epitaph really to be found in a Milwaukee cemetery?

Here lies the body of Peter Grace,
Who died from eating Sweitzer kase;
He finished six platters, commenced upon seven,
And exploded. Of such is the kingdom of heaven.

A CANDY boy passing through a car met a cross old gentleman, and said, "Pop-corn! pop-corn!"

"Hain't got no teeth," angrily replied the man. "Gum-drops! gum-drops!" called the rogue, immediately.

THE following sentence, "John quickly extemporized five tow bags," contains all the letters of the alphabet, and repeats only four of them more than once. The following sentence, however, contains all the letters, and repeats none of them: "Ab cde fghijk lm no pqr stuv wxy z."

A DENTIST was recently saved from drowning by a laborer, and from the depths of his grateful heart exclaimed: "Noble, brave, gallant man! how shall I reward you? Only come to my house, and I will cheerfully pull out every tooth you

have got in your head, and not charge you sixpence."

UPSETTIN' SINS. — Dr. McCosh, President of Princeton College, tells the story of a negro who prayed earnestly that he and his colored brethren might be preserved from what he called their up-settin' sins.

"Brudder," said one of his friends, at the close of the meeting, "you ain't got de hang of dat ar word. Its 'besettin,' not 'upsettin.'"

"Brudder," replied the other, "If dat's so, it's so. But I was praying de Lord to save us from de sin of intoxication, and if dat ain't an upsettin' sin, I dunno what am."

Our Mentorial Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of its early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage.

ATTENTION.—What is "attention?" What function does it perform? What relation has it to the mind?

Ans. Attention is an act of any one or more of the intellectual faculties in judging or comprehending the things, subjects, or qualities to which the faculty or faculties relate. ATTENTION is not a distinct faculty of the mind, as supposed by the old metaphysicians, but is an attribute or function of each of the intellectual faculties; thus the faculty of Individuality is that of recognition, apprehension, and it appreciates the presence of objects or their existence. Form is awakened to activity, and gives attention to the shape of the objects; Size to its magnitude, Weight to its density, Color to its hue, Order to its arrangement, or its relation to other things. Tune is excited by melody, and attends to sounds. Causality attends to the various stages or steps of an argument; and in whatever form attention may be given by the different faculties, it is the mere normal action of those faculties, and not the attribute of a special power. In order to study mind correctly, it is necessary to get rid of the trammels of the old metaphysicians. Each faculty has its own attention, and to a certain extent each faculty has its own memory; this is true of the intellectual powers.

The old school of mental philosophy endeavored also to establish or discover the laws of "association," as if a scene would produce the same associations in different individuals. One hundred men selected at random would look upon the same object with perhaps a hundred different associations of ideas. Take Niagara for instance. One man takes an artistic view of it; another, in whom Veneration prevails, would think of the great Creator and his wondrous power; another, who has neither imagination, religious sense, nor much of the esthetical, but a great deal of the practical and economic, would begin to study the dynamic force of the great waterfall. He would estimate the water-wheels it would turn; if he had mechanical talent, he would be considering the horse-power or man-power represented by that prodigious cataract. It is evident that men who would thus look upon such a scene with these different ideas, would afterward have associations just as different as their original perceptions and reflections were. When the word "Niagara" was spoken, the man of factories would hear the hum of spindles, the rattling of looms, the crash of saws, or roar of hammers. The devotee would think of

" * * * the mighty power of God
That made the mountains rise,
That spread the flowing seas abroad,
And built the lofty skies; "

while the esthetic and artistic would have floating before his vision the mist and its rainbow hues, the deep green of the plunging water, the foaming spray, and the musical roar; he would be studying its lights and shades and its picturesqueness.

Phrenology is the only system of mental philosophy that clearly explains Attention, Perception, Association, Instinct, Memory, Imagination, Will, and Understanding. All these attributes or mani-

festations of mind are possessed by every individual in varying degrees, according to his own peculiar mental endowment. No two persons on earth would ever think exactly alike, consequently no two persons could ever have precisely the same knowledge, judgment, impressions, or views of the same things. Hence their "associations of ideas" must differ accordingly.

SLEEPLESSNESS—DISEASED BONES.—

I have heard it stated, and also read in medical journals, that if a person has taken very powerful medicine during a spell of sickness, it often destroys the nervous system to such an extent that the person never has sound sleep afterward. Do you think such is the case, or is there any way to recover so as to enjoy good, refreshing sleep again? My object in asking is because I have not enjoyed (to my knowledge) one night of sound, refreshing sleep for five years. The fall of 1866 I was prostrated with disease which terminated in caries of the right hip and thigh and left ankle bones (commonly called fever sores), and am still suffering with the hip and thigh bone, but do not suppose they have anything to do with my disordered sleeping powers. Please let me know what you think of the above question.

Ans. Loss of sleep depends generally on nervousness, the result of disease or of immoderate use of the various hypnotics, as morphine, hydrate of chloral, etc. But it would be quite impossible to give accurate advice without more intimate knowledge of the patient's temperament and physical condition.

Perhaps following a simple hygienic plan might assist. Let the patient exercise moderately, so as to be somewhat fatigued at bedtime; let the supper be light, if taken at all; let the bed be not feather, or the clothing too heavy; let the temperature of the bed-room be not higher than 58° to 60° Fahr. Above all, give up all narcotics of every kind. A warm bath on retiring, with a hard rubbing or wiping dry, is often of service.

The diseased bones should be operated on at once by a competent surgeon, as the necrosis of the bone keeps up such an irritable state of the system that either medication or hygiene would be alike useless.

"THE BLUES."—I am just starting in life, having left school about a year since, and am troubled very, very often with "the blues;" it seems impossible for me to look upon the *bright side* of many things. Is there help for the blues? and should I always look on the bright side?

Ans. Depression of spirits, or the "blues," sometimes results from the constitution of a person. A high-toned, mental temperament, large head, slender body, or one the functions of which are torpid, with a large development of Cautiousness and moderate Hope, and too much work or study, too much or too little nutritious food, and not enough of sleep—any or all of these conditions will tend to produce that sad, dejected state of body and mind called the "blues."

Thousands of young persons become depressed, listless, and hopeless in consequence of private vices; and neither parent, press, pulpit, or physi-

cian gives the warning voice; the parent may be ignorant of the symptoms, the press shirks the responsibility, the pulpit may thunder abstract testimonies against the "exceeding sinfulness of sin," but is too *delicate* to call things by their right names, or too cowardly to say "Thou art the man!" and the physician who, if he knows his business, can read the signs of transgression in the face, form, and walk of every such sinner, does not speak the manly word of prevention through fear of giving offense, or, possibly, in some cases, he waits for a chance to make a bill when the ignorant wrongdoer becomes prostrated by his bad habits.

Moreover, the blues result from bad modes of living, especially from the use of such articles of food as tend to make the liver torpid, thereby inducing biliousness of habit; such as pies, cakes, candies, sugar, butter, griddle cakes, with the butter and syrup, gravies, fat meat, and fine-flour bread.

Many people have bilious turns and the blues who, if they would eat brown bread, lean beef, and fruit abundantly, and not over-eat, would be able to bid good-by to the doctor and the blues, and snap their fingers in the face of labor, care, and trouble.

A RED NOSE.—As a reader and admirer of the PHRENOLOGICAL JOURNAL, I appeal to you, through the columns of your valuable paper, for advice concerning the cure of a "red nose." I am a young man; and although leading a regular and temperate life, am troubled with the above. Moving in the best society, I absent myself from company as much as possible. And, what is very annoying, my companions are continually hinting that I am a hard case. My parents also wonder. Need I say that I am wretched? The pores of the skin, on and around my nose, and a little on my cheeks, fill up with an oily, mealy, yellow matter which, when picked or rubbed off, immediately fill up again. My nose, at times, is quite red and sore, and shortly after little pimples appear. You will probably say, consult a physician. I have a dread of doctors. I sometimes think it (the redness) is caused from want of exercise, bathing, or proper food.

Ans. Avoid picking, pinching, and otherwise irritating your nasal organ. Try a few wet-sheet packs or Turkish baths. These processes will take impurities out of the skin; then right living, with *proper habits*, all will go well.

NINETEENTH CENTURY.—Why is the present 100 years called the 19th century? Why is it not called the 18th century, and why not call it 19th century after the year 1900?

Ans. Let us go back to first principles. To-day a child is born, and begins to count his time of life. For 365 days he is working at his first year, and calls it his first year till it is finished. When he has completed 18 years he begins on his 19th year, and he might date his time 18½, 18¾, 18⅞, as we do the century, still he would be in his 19th year until it was completed. The 100 separate years which occur after the year 1800, are the 19th

hundred years, and are correctly called the 19th century, uncompleted, of course, till the last second of the last hour of it, yet the 19th until finished, and when finished we can no more say 19th, but we begin on the 20th. After one has traveled 18 miles he begins on the 19th, and if asked what mile he is passing he replies the 19th, at the first rod or step of it. This question, almost too simple to be asked, has been frequently propounded, and we hope this answer will satisfy all the little folks for at least a generation.

BZZZZZ IN THE HEAD.—I have a troublesome buzzing in the head, and this has existed as long as I can remember. During the day or when in the confusion of affairs I do not mind the buzzing much, but at night when all is still the buzzing is tremendous. It is impossible for me to describe the sound, but it seems as it does when a severe bump is given to the head, all but the shock and pain. I have always a slight, grumbling headache, and my head is not clear on that account. Please give me some advice.

Ans. Buzzing in the ears may be caused by organic disease of the auditory nerve or of the tympanum,—by some functional disease of the nervous system, by congestion of the brain from any source, and especially by sexual debility or over-excitement. Attention to general health may be safely practiced. Keep the circulation general and to the surface by proper bathing, rubbing, and exercise and ample clothing of the extremities. With such an indefinite description of the difficulty, we can not speak very specifically. You should consult a physician who can question you at length and examine your general and special symptoms.

VINEGAR BITTERS.—Will you be kind enough to let me know whether you think that Dr. Walker's Vinegar Bitters are as good as he represents them to be in his advertisements, and greatly oblige.

Ans. We regard these bitters only less injurious than others because they contain no alcohol. But when the vendors claim that they have any curative properties whatever, they claim that which is not true. It is, no doubt, one of the most—profitable to the makers—popular and harmless of the quack nostrums. Oh, the gullibility of ignorant, poor, sick humanity!

CATARRH, its Causes and its Cure, without medicines, was given in our last December number. Sufferers should read it. We have printed a new edition of that number, and can supply the same prepaid by post at 30 cents.

FEET WASHING A RELIGIOUS OBLIGATION.—Are Christians *required* to wash each other's feet, in order to carry out doctrines taught in the Bible?

Ans. Yes, if one feels that his safety depends upon it. But when one is able to wash his own feet—which he ought to do either at night or in the morning *every day*—why trouble another to do it? Children and invalids need to have assistance in the act, but you and I can wash our own feet,

and thank God all the same. Some folks dance as a religious rite; some dance as a social amusement, and for exercise, while others think it wicked to dance. When we write our work on Theology, in the light of Phrenology, we may discuss all these questions, and let in a little sunshine on the darkness of ignorance and superstition. Meantime we advise every body to keep both their feet, their entire persons, and their consciences just as clean as they can. This will all be acceptable to God.

ABSENT-MINDEDNESS.—Can this be overcome by study and discipline? If it can, what course should be pursued? I am twenty years of age, a printer by trade, have a tolerably good memory, and am very fond of study, though my Continuity is not very largely developed. I was for some years very dissipated, although so young, which no doubt superinduced this difficulty. I now am, however, and for some months past have been, living a more moral life, and use no tobacco or stimulants of any kind, not even tea or coffee.

Ans. Sometimes absence of mind originates in small perceptive organs, particularly Individuality, which fails to keep the attention to a given thing. Small Continuity added will allow the mental action to be vagrant and vacillating. A routine business like type-setting, which requires so little decided concentration of thought and permits the mind to rove at pleasure, is much more likely to dissipate the mind and disturb its harmonious action, than a business does which demands continuous thought and planning, and requires the continuous attentive action of perception and reflection.

What They Say.

TEMPERANCE CONGRESSMEN.—In our last number was published a letter from Washington which somewhat reflected on certain remarks we had been guilty of with regard to the intemperate habits of National and State legislators. Our correspondent defended American statesmen in very good English, but did not prove anything to the contrary of what we had alleged, and what is simply notorious. An extract from a recent number of the *New York Evening Post* is directly in point:

"Some of the Senators amused themselves during the morning hour yesterday by facetious propositions with regard to petitions asking the passage of amendments making drunkards ineligible to public office. However ridiculous such an amendment of the Constitution might be, the subject itself is anything but ridiculous, particularly in the United States Senate. Such an amendment, it is sad to remember, would have kept out of the Senate some of the most brilliant intellects of the country. The Senate can not laugh at the subject of temperance until American politics are relieved

of one of its great curses—a temptation to undue stimulation and ‘good fellowship.’ Those only who reside in Washington, or visit it frequently during the sessions of Congress, know how often the dignity of our most august legislative assembly is offended by members who are either ‘gently hilarious’ or who lounge at their seats in a dull stupor.”

It would appear, then, that the grave subject of temperance is made an object of mockery and ridicule, and that, too, in the highest council of the nation! This would seem as if Washington were a sort of rendezvous for guzzlers. Brains addled, and minds stupefied with alcohol, are not fitted to consider the important duties of legislation—they should not be found in Senate chambers, but rather in reformatories. Fellow-citizens, you who love your homes and your country, “Don’t vote for a man if he drinks.” This, impracticable as it may seem, is your only saving course.

MR. EDITOR—MR. HORACE GREELEY, in a recent magazine article on “Planning a Career,” says: “I hold induction into some calling which is essential to the satisfaction of our imperative wants, the first need of every human being. Let the youth be a poet or painter, if he will; let his sister become proficient in music or geometry, if her tastes so dictate; but let her first be taught how to cook, or sew, or keep a house in order, and let him be taught to grow corn, or build habitations, or make shoes.”

Suppose a young man has talents for teaching, or preaching, or has a desire to be a physician, must he spend the best part of his time in making shoes, or building habitations? Why can not he satisfy his “imperative wants” by having a profession as well as by a trade or handicraft?

To be sure there are enough professional men who barely make a subsistence, and is it not the same with the trades? It seems to me we want first-class men in every branch of business, trade, or professions. Yours, truly, C. E. G.

[Suppose a teacher to lose his voice or to become broken down by confinement and mental labor, would not a knowledge of some other pursuit, such as gardening, fruit culture, farming, or mechanism be valuable? Moreover, a student would make all the more rapid and permanent advancement in study by working some every day during his school life to learn enough of some laborious occupation to enable him to get a living by it should he find it necessary to leave professional labor. Nine-tenths of our college students spend as much time and strength in playing ball, billiards, quoits, or boating, as would be required to learn how to make bureaus or boots. We guess friend Greeley is right.—ED.]

EDUCATION vs. INTemperance. — A Minnesota subscriber of ours publishes in the *Wausaca News* his sentiments on the subject of

intemperance. They have the true ring. We quote a sentence or two:

“Education will prove itself the Hercules in the Augean stables of intemperance; and I believe that the lecturer who elucidates the physical and mental cause and effect of intemperance is doing the most to eradicate the evil from society.

“Whatever has a tendency to debauch the physical system always tends to cultivate the propensities. Therefore intemperance is the father of most of our national as well as social evils; the most lascivious are generally addicted to all the other habits of intemperance. Who ever heard of a *pariah* that did not keep her propensities stimulated with liquid fire? It is well known that most of the blunders committed by our generals during the rebellion may be traced to the influence of Bacehus. The cause of many of the most appalling accidents may be traced to the same prolific source.”

THE JOURNAL APPRECIATED. — It is always gratifying to be approved by the worthy. Subscribers, no less than editors and publishers, are interested in the good character of their journal, magazine, or newspaper. The following is one among many similar commendations of the PHRENOLOGICAL JOURNAL. It comes from a Michigan clergyman:

I have been for a long time a student of yours, though entirely unknown to you personally. I have for some time past been studying your work on “Physiognomy, or Signs of Character,” and have derived profit and pleasure from it, as I always do from the JOURNAL, which has come to be a household necessity. I remember, years ago, when the science you have so perseveringly advocated was almost a hiss and a by-word, and counted as an enemy to religion. But I thank God that science and revelation are not contrary to each other, and I am happy to congratulate you on the success that has attended your labors, until the people from every walk of life have learned that a knave may be known by the “phiz” he carries with him. Go on in your plain dealing with political and religious bigotry, and you shall have the God-speed of every true man and woman in the land. I shall try to help you by encouraging my friends to subscribe. With many thanks for the benefits and pleasures afforded me by your publications, I remain your friend for truth, ***

Pastor of the First Baptist Church, —, Ionia Co., Mich.

THE *Rural Southland*, published in New Orleans, says:

“This splendid monthly begins a new volume under unusually fine auspices, and from its cheerful tone and vigorous expressions of faith in the future, evidently proposes to reach the height of journalistic success. It is edited with singular ability and a broad and comprehensive idea concerning the questions of the period. Maintaining its peculiar phrenological ideas as the chief feature, its editor wisely concedes a place to all articles that are correlative to the subject, and everything that has a tendency to promote intelligence and physical and mental health. Published and edited by S. R. Wells, New York.”

We thank the *Southland* for its words of commendation, and shall try to continue to merit its approval.

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

VOL. LIV.—No. 5.]

May, 1872.

[WHOLE No. 400.]



DAVID DAVIS, JUSTICE OF THE SUPREME COURT OF THE U. S.

THE PRESIDENTIAL CAMPAIGN.

NOMINEES OF THE LABOR REFORM PARTY—DAVID DAVIS AND JOEL PARKER.

THE labor agitations of the day have assumed such proportions as to become a subject of special political concern, if the recent Convention at Columbus, Ohio, be a

suitable criterion for judgment. Politicians generally claim that the presidential campaign was formerly opened at Columbus on Washington's birthday, by those leaders in

the Labor Reform movement, who brought their proceedings to a climax by nominating as candidates respectively for President and Vice-President of the United States the Hon. David Davis, of Illinois, and the Hon. Joel Parker, at present Governor of New Jersey. The issue, then, in the important matter of work and wages, has been brought face to face before the people, and asks their consideration at the ballot-box.

American political economists have for several years given their attention and careful study to the relations existing between capital and labor; they have ventured many theories with the view to securing their harmony and co-operation, but, as yet, no practical result has been secured. In foreign countries, these two great elements of civilized society have been antagonistic for generations, and a harmonious settlement of the prevailing strife seems by no means near at hand. One salient cause of the bitterness is the existence of the hereditary and landed aristocracy, the suppression or abolition of which is by no means likely so long as European governments partake of the monarchical character. In this country, however, where we have no established legal grades of rank, the prospect of a resolution of the difficulty, which shall be marked by impartial justice, is not so obscure. The working man has an equal right with the purse-proud capitalist to deposit his vote at the ballot-box, and his vote is of equal strength. There we must look for the final adjustment of all great opposing interest, social as well as political.

A Boston workingman thus apostrophizes the relations subsisting between capital and labor:

"Capital without labor is like faith without works—*dead*. Labor without capital is like works without faith—*valueless*. In the nature of things there is perfect harmony between them, and selfishness alone suggests any antagonism. Let capital beware lest it ali-

enate labor. Let labor beware lest it cripple capital. Let capital say to labor, 'lend me thy hands;' and let labor reply, 'I will; but let me hold one of the strings of thy purse.'"

But who shall define these relations so as to give them a basis for practical and harmonious correlation, that the happy results so earnestly hoped for by every economist shall be attained?

It being our intention to present to the notice of our readers the portraits of the men who may be distinguished by the leading political parties as their candidates for the highest offices in the gift of the people, we in this number publish the nominees, already mentioned, of the so-called Labor Reform Party.

Judge Davis has, as appears in the engraving, a strong, solid-looking face; he is firm, steady, square, and erect, without brilliancy, without ostentation, without pretension. He might be considered rather heavy in intellect, and not to be taken as a fair type of the American man for the reason that he does not possess the characteristic sharpness and facility of the typical American. His convictions are not reached by a sudden grasp of the intellectual comprehension, but are deliberately, gradually gathered in. He is consequently a man of solid attainments, a man of positive knowledge; he doubtless believes in the aphorism, "slow but sure," and would rather be "a tortoise on the right track than a racer on the wrong." His opinions are generally received as sound, for the reason that they are the results of compact thinking—thinking founded upon acquired facts. He is by no means indifferent to exterior conditions, which relate to things in which he is interested, but he does not allow slight circumstances to affect his opinions.

Judge Davis was born in Maryland, in Cecil Co., March 9th, 1815. Having gone through a preparatory course of study, he entered Kenyon College, Ohio, from which

he was graduated in 1832. After leaving college, he turned his attention to the study of law, going to Massachusetts for the purpose, and also to New Haven, Conn., where he availed himself of a course of lectures in the Yale Law School. In 1835 he went to Illinois, where he was admitted to the bar, and soon after settled at Bloomington to

was elected Judge of the Eighth Judicial District of the State. At the end of the term he was re-elected to the judicial position, and again in 1861 he was reinstated.

With Mr. Lincoln he was for many years an intimate personal friend. These two Illinois lawyers had been thrown much together by the practice of their profession in



PORTRAIT OF JOEL PARKER, GOVERNOR OF NEW JERSEY.

practice. Success attending his early career as a lawyer, and finding it congenial, he took some interest in the political movements of his town. In 1844 he was nominated and elected to the State Legislature. In 1847 he served as a member of the State Constitutional Convention, and in the year following

a thinly-populated country, and their relations became close and confidential; and when sent as a delegate to the Chicago Presidential Convention of 1860, Judge Davis contributed not a little toward securing Mr. Lincoln's nomination. In 1862 he was appointed an Associate Judge of the Supreme

Court of the United States, which position he still holds. By the will of his lamented friend he was appointed an executor of his estate, and in pursuance thereof he carefully attended to the adjustment of its affairs.

Politically, he was at the time of his appointment to the Supreme bench an out-and-out Republican, but of late years his views have undergone a change, so that he is now regarded as a Conservative. His nomination by the Labor Reform Party may be regarded as partaking more of the Democratic stamp than of the Republican; in fact, there has been much discussion on the part of prominent members of the Democratic section with reference to his being an available candidate in their interest for the Presidency.

In his dispatch accepting the nomination, Judge Davis made the following emphatic declaration: That if people who seek to bring about a reform in the Government, who favor amnesty for political offenses and a restoration of the Government in its integrity, the supremacy of the civil over military power and its upright enforcement, hostility to centralization, and integrity in the administration of affairs, desire him to represent them as a candidate for the presidency, he will accept that honor, because those principles accord entirely with his convictions.

Governor Parker has many of the characteristics of the active, energetic man; his temperament is of that quality which serves to render his faculties thoroughly alive. His broad head shows no little practical ability, and his eyes indicate facility of lingual expression. As a thinker he possesses much originality, with those accessories of embellishment and method which proceed from a high appreciation of the esthetic and the well-ordered. In contrast with the gentleman before considered, Gov. Parker possesses many of the elements of the brilliant American. He has the organization which adapts him well for the off hand yet thoughtful speaker; he can be free without superficiality; he would at least grace the position of second officer to our nation well.

He was born in Monmouth Co., N. J., on

the 24th of November, 1816. His father was a man eminent in the politics of his State, for many years serving through various changes in its political administration. While preparing for college, young Parker passed much of his time in his father's office, where he gathered no little valuable information. In 1839 he was graduated from Princeton College, and studied law with Hon. Henry W. Green, of Trenton. He was admitted to the bar in 1842, and commenced the practice of his profession in Freehold, his present residence. He early took an interest in the political matters of his State, and distinguished himself as a speaker. In 1847 he represented the old district of Monmouth in the Legislature; in the following year he refused the nomination for State Senator, and was soon after appointed Prosecuting Attorney of Monmouth County. In this official capacity he served five years. In 1860 he was chosen Presidential Elector by a large majority, and cast his vote with two other Northern electors for Stephen A. Douglas. In 1860 he was nominated for the Governorship of New Jersey, and was elected by nearly fifteen thousand majority. His administration of the State Government during the most trying period of our civil war, was characterized by acts indicating a true appreciation of the enormity of the contest, and of the important part of his State in it. Public sentiment awards him the merit of having given a close eye to an economical administration of the public finances.

At the close of his term of office, Gov. Parker returned to the practice of his profession at Freehold. In 1868, at the National Democratic Convention in New York, he received the full vote of New Jersey in every ballot for the nomination for President. He was renominated in 1871 for the office of Governor of his State, without having sought the office; the choice, however, being unanimous, he accepted it and went vigorously to work to secure his election; the result was a majority in his favor of about six thousand votes.

In his inaugural address on assuming the functions of office, Governor Parker alluded to the labor question, and expressed certain views which can be introduced in this connection with marked propriety:

"There should be no conflict between capital and labor. The interests of both can be made to harmonize so that both will be benefited. Capital has its rights, which should be protected, and yet it is so powerful that the laboring interest requires the constant watchful care of legislation to defend it from imposition. Labor demands just and equal laws, and the abandonment of all class legislation.

"Where the producing classes are receiving liberal compensation, the people are prosperous and happy. Competitive cheap labor, diminishing wages to almost starving rates, is ruinous to a country where the people govern. Reduce a man to penury, and you take from him that self-respect and spirit of independence which every citizen should possess. In a republic it is essential that the masses have remunerative wages. Their labor should be so rewarded that time can be had for relaxation and the acquisition of that degree of knowledge that will enable them to exercise, understandingly, the rights and privileges of freemen.

"The Legislature should institute rigid inquiry into the treatment of children employed in workshops and factories. There is reason to believe that the provisions of the act of 1851, the second section of which limits the hours of labor of minors and prohibits the working of children of tender years in manufacturing establishments, are often disregarded. Not only is the mind left untutored, but in some instances the body of the child is enervated by onerous requirements. The State should not permit the cupidity of employers or the necessities of parents to overtax the young and helpless. She not only owes every child an education, but also protection in the proper development of the physical powers which God has given. The body made by Him who created all things, to be the abode of the soul, is not man's to abuse or to be abused."

In person, Gov. Parker is a fine-looking, impressive man; he is tall, being something over six feet in height, and weighing nearly 240 pounds.

PLATFORM.

It is fitting that we should give in this connection the substance of the resolutions adopted by the Columbus Convention as

their platform of principles. The first announces that it is the duty of the nation, through her Legislature, to establish a just standard of distribution of capital and labor by providing a purely national circulating medium based on the faith and resources of the nation, issued directly to the people, without the intervention of any banking corporations; which money shall be legal tender for the payment of debts, public and private, interchangeable at the option of the holder for Government bonds, bearing a small rate of interest, not exceeding 3.65-100 per cent., and subject to future legislation.

The second favors the payment of the national debt according to the original contract. The third declares the exemption of Government bonds from taxation and infringement of the spirit of the revenue laws. The fourth opposes the sale of public lands to individuals or corporations, and favors the holding of them for the benefit of landless settlers. The fifth resolution advocates the admission free of duty of articles in common use not produced here, and a revenue upon articles of luxury, and also such duty upon articles of manufacture, for which the country produces the raw materials in abundance, as will assist in further developing the resources of the country. The sixth advocates the prohibition of the importation of Chinese by legislation. The seventh favors the eight-hour law. The eighth demands the abolition of contract labor in prisons.

The remainder advocate the assessment and collection of war taxes, instead of leaving the debt to posterity; call for Congressional legislation to prevent exorbitant charges by railroads and telegraphs; favor the one-term principle and general amnesty, and equal rights and privileges to all.

WORK AS MEDICINE.—There are some great troubles that only time heals, and perhaps some that can never be healed at all; but all can be helped by the great panacea, work. Try it, you who are afflicted. It is not a patent medicine. It has proved its efficacy since first Adam and Eve left behind them, with weeping, their beautiful Eden. It is an officinal remedy. All good physicians, in regular standing, prescribe it in

cases of mental and moral disease. It operates kindly and well, leaving no disagreeable *sequella*, and we assure you that we have taken a large quantity of it with the most beneficial

effects. It will infinitely cure more complaints than any nostrum in the *materia medica*, and it will not sicken you if you do not take it sugar-coated.

HOW THE DIFFERENT FACULTIES COMBINE.—No. 4.

IN our schoolboy days there used to be an arithmetical problem which puzzled us. The purport of it was, "How many changes can be rung on nine bells?" We remember the number was astonishingly great. We may now ask the question, how many changes, how many shadings or manifestations of character can be produced through forty faculties, and these working modifications according to their variation in size, strength, and culture? It should not be forgotten that faculties work in groups. The social, for instance, naturally cluster around a common center, co-ordinating, abetting, or assisting each other very much as the braided strands of a whip or the compacted strands of a rope give a common support and strength to each other. Again, the moral faculties co-operate if harmoniously developed. Veneration, for instance, leads off, and the others co-ordinate with it. How natural the statement, "Fear God (Veneration) and work righteousness" (Conscientiousness). Also, "Do justly (Conscientiousness), love mercy (Benevolence), and walk humbly with thy God" (Veneration). "Live as seeing Him who is invisible," involves Spirituality and Veneration. "Let us hope lest a promise being left to us any should come short of it," is addressed to the faculties of Hope and Spirituality. "Be steadfast, immovable," is addressed to Firmness. "Always abounding in the work of the Lord," brings into view the action of the moral faculties. Firmness works with the moral as well as with other groups of faculties with equal facility. Then, if we take the secular group—Cautiousness, Secretiveness, Acquisitiveness, Constructiveness, Combativeness, Destructiveness,—how they all co-operate in the varied daily duties of business.

The intellectual organs, working alone, contemplate the facts and phases of life and business, investigate science, the laws of the universe, things material, and become, when trained and cultured in this direction, scholarly. They are the knowing, reasoning, comprehending powers, and they work, not toward mere materialistic considerations, but rise into har-

mony with the secular, social, moral. Every faculty, whether it relates to the spiritual, moral, social, esthetical, or scientific, comes under the scrutiny and investigation of the intellect.

We know the power of affection, of hope and fear, of pride and ambition, of will, of sympathy, of love, of hate, of suspicion, of arrogance and avarice. What, then, is the man when all these powers act in harmonious combination, co-operate—when all the emotions and passions are wrought into one potential force? Indeed, man "is made but little lower than the angels, and crowned with glory and honor," provided always that these wonderful forces of his nature are permitted to work normally as they are intended by the Creator, and act harmoniously with equal strength and vigor.

With this view of the case, is it surprising that in two or three articles this subject of the combination of the faculties can not be exhausted? If all heads were harmoniously developed, the subject would not be so full of interest, so intricate and difficult to comprehend. If all the primary colors were blended in equal degree, it would produce a uniform result; but when these primary colors are combined in different ways, there being twice as much of one as of another, and only a faint shading of a third, with a strong predominance of a fourth, we thus obtain any shade or color known in nature and art.

Let us for a moment dwell on the intellectual combinations. Any person who will step into a school-room where there are fifty pupils, will readily see what a variety of shape there is in the foreheads of the children. One will have a full, prominent eye, a prominent brow, and a retreating forehead. All the perceptive in him will be large, and he will catch knowledge, as it were, on the wing; will be quick as a flash in gathering facts and acquiring information which comes by observation. As, for instance, he will be brilliant in the study of geography, will take instruction readily from sketching or drawing on the blackboard or map or in penmanship, and will be prominent in such

branches—a leader of the school. He may be excellent in grammar, at least in the acquisition of lessons by rote. He will commit to memory, being able to go through the book in half the time required by some other pupil; will have everything at his tongue's end, and be very brilliant and promising, and up to eleven years of age may be accounted the paragon of the school; but when he comes to move up to the higher branches, advance to the study of mathematics and philosophy, to reason upon grammar and the laws of language, he somehow gets puzzled. Those large eyes of his will seem to have been smitten with doubt and uncertainty, and his forehead will wrinkle with puzzled anxiety. But the dull head which could not learn the grammar lesson or find the places on the map, found much difficulty in spelling and was a poor reader, begins to pass him. What sort of a head has the one who was dull in the primary department, whom the teacher thought stupid, and who had hard work to remember the multiplication table or the definitions, and was at the foot of his class? He has less development across the brow than the one before described. His eyes are small and apparently sunken in the head, but he has a high, broad, heavy forehead at the top. It even projects as compared with that of the other boy. His large reasoning organs make him capable of comprehending the why and the wherefore, the philosophy of causes and consequences. He does not get his knowledge through the channel of facts so much as from reflection stimulated by facts. He reaches into the domain of philosophy and the realm of causes, and so the bright boy who "ponied" him through his arithmetic, and prompted him in his grammar, and assisted him in his geography, and bore his burdens from seven to twelve, now finds his master in the realm of the higher branches, and is being helped in turn in his mathematics and philosophy; in short, in all subjects which require hard, strong reasoning power, which are not acquired by mere perception or ready, quick observation. Let us follow these boys into business, after they have obtained as much education as may be sufficient, and where will we find them? We will find the talkative, bright, smart boy in the sales department, handling goods, learning their names and qualities, talking about them, meeting the customers, and transacting the details. The square-headed, dull boy will be at the head of the business. He is found in the counting-room planning voyages, studying modes of importa-

tion, the laws of trade and political economy, figuring out, as it were, by mathematical demonstration, the business affairs to be accomplished within the next six months or eighteen months. He is about to send a ship to China, while his brilliant cotemporary is vending the goods of former importations.

Now, people do not undervalue the dull boy or have a tendency to overpraise the brilliant, precocious one when they come to be men, though we place the thinker in the department where thinking is to be done, and the observer and practical doer among the physical activities of trade. Both are useful in their several spheres, and each is the complement of the other; and both are required to work together in order to cover the whole field of duty and usefulness.

We would impress upon the minds of teachers and parents the necessity of educating these two kinds of pupils according to their natural capabilities. We would suggest—and we believe that the common sense of the world will some day reach this point—that such pupils be classified, all those with large perceptive organs being grouped together, so as to give them an even race. We classify race-horses and draft-horses, expecting the former to be speedy and the latter to be powerful. Then why not classify the speedy, rapid observers, the quick learners, by themselves, and those who have to be taught through their reasoning faculties by themselves? It is evident that students of a reflective cast of mind cannot be instructed so readily through the perceptive as they can through their reflective faculties. It is certain that the boys with retreating foreheads will not readily comprehend dry, logical statements. They want facts and illustrations; they need to have the subject made sharp and practical. Indeed, one might as well attempt to feed little chickens on whole corn as to feed such minds as are strongly organized for perceptive knowledge and weak in the reflectives with logic and the law of things. And while on this point, we will say that persons of active, excitable temperament with similar-shaped heads should be separated from those of moderate mold and of slower temperamental nature.

But what sort of a teacher should these different classes of pupils have? It is a fact that if you instruct perceptive pupils by means of a teacher having just such a head as their own, the little fellows will never get any of the higher ideas; and if we instruct square-headed boys by means of a teacher of the same mold, they will be starved as to facts. The teachers should

have for each class of boys a well-balanced intellect, with perceptive enough to teach the perceptive boys, and reasoning power enough to communicate to them at the same time the philosophy of the facts treated. The boys with depressed brows and heavy top-heads should

have also a well-balanced teacher who can comprehend the philosophy of subjects and lead his pupils to appreciate the facts whereon the philosophy is founded. He should be able to instruct his pupils in reference to details, particulars, and the practical features of things.

THE ADVANTAGES OF SELF-MADE MEN.

IT seems as though men born in the midst of wealth and powerful friends should be the very ones to occupy most honorably the highest positions in society; they have others to help them, and possess the key to the facilities for a thorough education and a wide knowledge of the world. Yet history shows that it is not the men who are reared in homes of wealth and power, but rather those who make themselves eminent by their own unaided exertions, that become the most shining ornaments of society. Many wonder at this, and are at a loss to know from what cause it arises. "Why is it," they say, "that the humble printer of Philadelphia should become the greatest philosopher of America?" "Why is it that the obscure back-woodsman's son should be acknowledged chief of the most civilized and intelligent nation of the earth?" "Why is it that the poor, homeless German boy should surpass all the men of his time in acquiring wealth, and die worth twenty millions?"

Overawed by the power of intellect and breadth of character exhibited by these great self-made men, many are led to believe that it is to nature they owe all their wonderful superiority. But why should nature so often be more indulgent to the denizen of the cabin or hovel than to the proud heir to the mansion or palace?

Self-made men, as a class, have not had the apparent advantages of others' help; and those circumstances which are regarded as most favorable to the attainment of the end to which they aspired, have not been enjoyed by them. On the contrary, they have traversed a great and seemingly impassable gulf in gaining their object. True it is, that the difficulties which those encounter who raise themselves to eminence are often prodigious; and it may be that nature is often lavish of her gifts to them; but it is not to nature alone that they owe all their wealth of mind and character. There are other influences often overlooked which are potent in the formation of those human prodigies which occasionally excite the admiration of society.

It is difficult to enumerate the qualities necessary to greatness, since there are so many ways in which men may be great; but it is evident that no man can become eminent without a knowledge of human nature, and the more deep and penetrating that knowledge is, the more extended will be his control over others. Greatness of intellect requires, not only that a mind should possess a wide and varied store of information, but also that it should be quick to perceive and powerful to grasp the deepest subjects. Moreover, a man to be great must have independence and decision. These are especially necessary to those who would rule, and were prominent features in the character of Cromwell, Napoleon I., and Washington. These qualities are possessed, in some degree, by almost all eminent men, and, as a general thing, the greatness of any man will depend upon the extent to which they are normally developed.

Now, it is obvious that an acquaintance with human nature is not to be gained by a mere study of books or by private meditation, but by association with men; and not with men of one class alone, but of every class and character. And who associate with men more than those who rise from the lowest to the highest class of society? The average man in the walks of poverty may have a wide knowledge of ignorance and distress, both from experience and observation; but of man in the midst of luxury or clothed with power and served and honored, he can form only a faint conception. Those in the middle class chiefly know men in easy conditions, where they are neither oppressed with want nor rendered proud with success and honor. The rich, by birth, have a knowledge of man in all his pride and ostentation, but possess scarcely more than a faint conception of him in a state of poverty and oppression. But one who, rising from the lowest grade of society, passes successively through each of the stages, has a marked advantage over those born in the higher class, because he can view men from every standpoint.

They seldom become rich by their own exer-

tions who, in youth, have all the money they desire. It is those who earn their first dollars by the severest toil who learn the value of money and become the wealthiest men. A similar course is very favorable to wealth of mind. It is of the greatest importance that there should first be a high appreciation of knowledge; and this is likely to be the case when its first rudiments are gained with great toil and difficulty. Those born in humble circumstances, who have strong, craving intellects, prize their few books and few means of knowledge; and having once gained such an appreciation of knowledge, it matters not how broad the current may become that flows in upon their minds, they never learn to despise it. Besides, those in the humbler classes of society have the highest incentives to patience and industry in the pursuit of knowledge. They have not only fewer temptations to idleness and evil habits, but to no other class do patience and industry offer a greater reward. Knowledge is their reward; and knowledge offers to the poor boy wealth and power and friends and fame; and the poorer he is, the more brilliant and attractive its proffers appear. On the other hand, the rich man's son already possesses wealth and friends, and dwelling nearer the palaces of power and fame, he learns to despise their glory, and to prefer ease and idleness. Moreover, the fame of the son of wealth rarely, if ever, becomes so extensive as that of the son of poverty; for the latter is identified with the great mass, and receives the good wishes and hearty praises of all; while the former can never receive from the lower classes that genuine love and admiration which arise from the feeling of equality.

There is an immense amount of knowledge floating through the world which is not to be found in books. This is of the most varied nature and most practical importance. It is the vast supply of this which enables the great man to adapt himself to the age. It is from this that men frame popular laws, and in various ways gain the favor of the people. It is the man who, from necessity, associates with every kind of people, that reaps the most abundant harvest from this field.

Another aid to mental greatness must not be overlooked. It is impossible for the mind long to remain strong and active, if it be continually encumbered with a sickly and dilapidated body. Physical strength and perfection are mighty auxiliaries to intellectual power; and whatever conditions contribute to the development of body as well as of mind must also be favorable

to mental greatness. But health and strength are peculiarly the possessions of the humbler classes. These form the patrimony of the ambitious son of poverty; and it matters not what course he is inclined to pursue, it is difficult for him to cheat Nature out of her dues before she has made him a strong and vigorous man—before that great protector and servant of the mind is made worthy of its trust, and able to perform perfectly all the duties imposed upon it.

Independence and decision were named as among the qualities essential to greatness. But independence can arise only from a consciousness of ability to care for one's self; and that consciousness results from a frequent reliance upon one's own resources. And decision of character is developed by such conditions as require one to choose between important alternatives—to mark out his own course and pursue it undeviatingly in the face of all obstacles. Now, the rich man's son learns to depend on his wealth. On account of his riches, he is surrounded with many advisers and flatterers. From selfish motives, others are eager to think, act, and plan for him, and it is long before he learns to trust himself, for the simple reason that it is seldom necessary. But the son of the poor man is early thrown upon his own responsibilities. His friends expect no profit from him, and have enough to do to take care of themselves. Prejudice prevents the rich from seeing any good qualities in him. The poor can not appreciate them. He is left to form his own estimate of his powers, to mark out his own course, and pursue it as he pleases. Opposition comes from above him; he receives little encouragement from his equals; and his own strong mind and vigorous body is all he can safely rely upon.

Benjamin Franklin's history illustrates this principle. No man ever fought against poverty more sturdily than he. No one ever struggled upward with a more steady and undeviating step. Few have gained their knowledge with more difficulty, or so much of it from experience. No one had a wider or more varied store of information, or a mind more vigorous, or a character of more strength and independence. The same principle is confirmed by Lincoln's history. Aye, a thousand others might be named to show that those who, by their own unaided efforts, have risen from the humblest to the most honorable positions in society, have reaped the most important advantages from, and owe much of their greatness to, those very conditions which are so generally

considered unfortunate obstacles; and these are eminently *self-made men*.

Is it any wonder, then, that the denizens of the cabin and the hovel during one generation should become the administrators of justice and the lords of the palace during the next? Is it wonderful that the most illustrious of those "few immortal names" have been drawn from

the ranks of the self-made men? It must ever be that the genius which has been refined and purified by the most trying ordeals will blaze forth with the brightest splendor; and that must be an exceeding great man who, though reared in a palace and in the midst of luxury, is still able to cope with the man who has tarried long and traveled far in attaining the object of his ambition.

J. L. McCLELLAND.

HISTORY OF PHOTOGRAPHY IN AMERICA,

WITH PEN PORTRAITS OF PROMINENT WORKERS.

[CONTINUED FROM APRIL NUMBER.]

CONTENTS.—History of Photography—Niepce, Daguerre, Talbot—John W. Draper—Samuel F. B. Morse—Alexander S. Wolcott—Edward Anthony—Henry T. Anthony—Albert S. Southworth and Josiah J. Hawes—M. B. Brady—Abraham Bogardus—John A. Whipple—George G. Rockwood—F. A. Wenderoth—William Kurtz—William Nottman—Lewis M. Rutherford and D. C. Chapman—E. and H. T. Anthony & Co.—A few Hints to the Public—Appropriate Costume—The Gem of a Photograph—The Future of Photography.

WILLIAM KURTZ

is a native of Germany, and was born at a village near Frankfort-on-the-Main. At the age of fourteen he entered the Staedlishe Institute, an academy for artists in Frankfort, with the intention of becoming a painter. The death of his father deprived him of the means of pursuing his studies, and when sixteen years old he was compelled to relinquish his plan of education. Influenced by his love of art, he apprenticed himself to a lithographer in Offenbach, with whom he remained until, according to the requirements of the law of the land, he was summoned to serve as a soldier. After a service of two years in the army, he went to England, where he enlisted in the British-German Legion, then organizing for service in the Crimea. At the termination of the war with Russia, he returned to England, and endeavored to obtain employment as a lithographer, but unsuccessfully, as his ignorance of the English language was regarded an insuperable disability by employers. Despairing of finding a congenial engagement, in a sentimental fit of despondency he offered himself and was accepted as an ordinary seaman. Like Æneas, of classic renown, his voyages were stormy ones, and he met with varied and perilous adventure. While on board the Oxnard, an American clipper, he was wrecked off Cape Horn, but was rescued by an English vessel, from which he was transferred to the Chariot of Fame (afterward destroyed by Semmes), which was bound for America. After being seven months and a half afloat

endeavoring to cross the Atlantic, he had the good fortune to find himself landed in New York. But his passion for roving was not diminished by disaster. While looking about for a vessel destined for California, a circumstance occurred which changed the entire complexion of his plans. He was seated in a restaurant, and listlessly glancing over the columns of a newspaper which happened to be near to him, when suddenly his attention was arrested by a photographer's advertisement for the services of an assistant. He was induced to apply for the situation, with not the remotest expectation of meeting with success. Greatly to his surprise, he found himself engaged at a very modest salary. He devoted himself assiduously to the duties of his new calling, and became ambitious to excel as a miniature-painter. But his first efforts in that direction were anything but encouraging. Rough usage had rendered his hands stiff and clumsy; but his resolution was not to be defeated—he persevered and his hands resumed their cunning. He made such rapid progress as a miniature-painter that his earnings soon amounted to fifty and even eighty dollars weekly. In 1866 he introduced the porcelain picture, which at once became a favorite. He soon afterward began to do business for himself. He fitted up a photographic establishment and employed two assistants. Five years have elapsed, and William Kurtz occupies one of the most elegant establishments in New York city, employs forty assistants, and is recognized as one of the most accomplished portraitists in

the world. Nothing short of a high order of genius could effect such marvelous progress in so brief a period.

Mr. Kurtz has, perhaps, contributed more toward developing the *laws* of photographic art than any one, or perhaps any number of individuals. Ten years ago photography scorned all recognition of esthetics; and the rules applicable to ordinary painting were inapplicable to sun-painting. Mr. Kurtz, after diligent investigation, determined that the roving sunbeam was as tractable as the painter's pencil. He borrowed the art of contrasting light and shadow with effect from Rembrandt Van Ryn, the great master of light and shadow, and applied it to photography. Rembrandt, by skillfully mingling light and shadow, vividly imitated the play of the countenance, and made his portraits speak the sentiments of the soul. With no other colors than the black of ink and the white of paper, he is unrivaled as a colorist. Kurtz, like Rembrandt, employs no other colors than the white light and the opaque shadows; and he depicts not merely the substantial, but the spiritual likeness. The Rembrandt style of photographic portraiture realizes the artist's ideal conception of consummate beauty. Mr. Kurtz also introduced the practice of "retouching" negatives with a pencil, by which the harsh lines of contour are softened, and accidental or natural blemishes are meliorated. He made many improvements in photographic appliances, chief among which are the improved filter, the platform, the background, and counter-reflector. He has also invented several elegant mountings, which have been adopted by photographers everywhere. The background is an instrument of great value, and is almost ridiculous in its simplicity of structure. It presents the appearance of a great tea-cup, and in fact the idea of its contrivance was suggested to Mr. Kurtz while experimenting with a tea-cup, which was made to regulate the reflection of candlelight on his little daughter's doll. Mr. Kurtz makes a specialty of photographing busts; and in delineating the face with its varied expression, he is a master without a rival. In the world of art, Mr. Kurtz's merits are fully recognized, and in every country on the globe his work is sought for as models and master-pieces.

WILLIAM NOTTMAN.

This gentleman is the prominent photographer in the Canadas, and everywhere occupies a distinguished place among artists. He is a native of Renfrewshire, Scotland, and settled in Montreal in 1856. Several medals and prizes have been awarded to him at exhibitions in both hemispheres for the excellence of his work. He carried away medals from the World's Fair, held in London, and from the French Exposition. Mr. Nottman is the originator of the method of producing illustrative effects of out-door scenery, by means of machinery attached to the studio. Photographs representing hunting and fishing scenes have been so consummately executed by him, that the deceit wore the vividness and truthfulness of the reality. He has an extensive photographic establishment at Montreal, where he employs some fifty assistants; and he likewise maintains branch establishments at Ottawa, Toronto, and Halifax, all of which are pecuniarily successful. Mr. Nottman's first acquaintance with photography was made by him as an amateur. He inherited a taste for art from his father, who was a designer of patterns for the manufacture of the celebrated Paisley shawls. Through the favor of his father, he received a thorough education in the principles of art, which secured to him superior advantages in the practice of photography. Mr. Nottman has powerfully aided in the development of sun-painting to its present state of perfection. To him and a few others belong the credit of rescuing photography from the clutches of mere manipulators, actuated by no higher motive than a sordid one, and elevating it to its proper place among the fine arts. We anticipate that photography will receive further contributions from the genius of Mr. Nottman.

LEWIS M. RUTHERFORD AND D. C. CHAPMAN have together attained remarkable results in astronomical photography. For a series of years past, these gentlemen have been engaged in correcting the object-glass of Mr. Rutherford's telescope in this city, for photographic purposes. The process has necessarily been slow and difficult, each imperfection in the image requiring a corresponding correction of the instrument. The ulterior design is to obtain an accurate map of the

heavens, in which the fixed stars will occupy their precise positions. By a simple but ingenious contrivance, each star is photographed duplex, and the line of its path in the heavens is also traced on the photographic plate. This is done to insure accuracy. These gentlemen have executed some exquisite pictures of celestial objects, chief among which are a photograph of the solar disc and of the Pleiades, which evoked the unbounded admiration of the members of the Royal Astronomical Society. They have also made photographs of the moon in its various phases, which won the silver medal of merit at the French Exposition. The members of the world of science are eagerly watching the result of these gentlemen's experiments, and doubtless photography, under their guidance, will be made to solve many a sublime mystery.

We regret our inability to mention the names of others who have won a right to be remembered for their services in the cause of photography; but a magazine article is necessarily restricted. But our work would be incomplete were we to refrain from noticing the great reservoir of photographic supplies.

E. AND H. T. ANTHONY AND CO.

preside over the largest photographic stock establishment in the world. Nearly a quarter of a century ago, Mr. Edward Anthony began the business with a small capital. As the sphere of photography enlarged, so did this house, until it has grown to become prominent in the world of commerce in both hemispheres. The main establishment is at No. 591 Broadway; and the loiterer who leisurely promenades the great thoroughfare, to gaze listlessly at the novelties of fashion, little dreams, as he passes the portals of No. 591, that his curiosity is cheated, and that he has turned his back on a realm of beauty and of enchantment. This warehouse covers an area of 30 by 200 feet, and its interior is adapted to the complicated character of the business transacted there. Part of the first floor is occupied as a sales-room for photographic materials, stereoscopic views, and photographs. On the second floor is the chromo gallery, where is displayed a brilliant collection of chromos from all countries. A selection of albums of great diversity and of rare and costly fabrication afford

an additional feature of attractiveness. The third floor is set apart for the reception of wares, which are here inspected and distributed. The upper story is used as a store-room. The packing and shipping department is located on Mercer Street. The number of assistants employed in this building exceeds forty. Several factories feed this emporium. One at Jersey City furnishes the supplies of chemicals; one at No. 65 Broadway, 40 by 200 feet, fabricates frames, albums, stereoscopes; and the upper part of the New Haven Depot is equipped with machinery, propelled by steam, which cuts cards and embosses. The stereoscopic department is a great center of attraction. Photography in all parts of the world has contributed to the collection of views, sketches of natural scenery, portraits of eminent persons, copies of gems of statuary, and stereographs of infinite variety. Specimens of the Dalmeyer lenses are also displayed. This is the best lens made. The cloud and atmospheric effects published by Robinson & Cherrill, England, are marvels of sun-painting. Nature is by them counterfeited so naturally that artists procure them for studies. It is interesting to observe the improvements made in the construction of the implements of photography. Many varieties of the camera exhibited in these sales-rooms are elaborately finished and appear as elegant ornaments. The resources of this establishment are such that a photographer can from the stock equip his gallery with all the requisite implements and appendages. A partner resides abroad whose occupation is to look out for novelties, and to watch the foreign markets. Mr. William H. Badeau represents the house in Europe; Mr. Edward Anthony manages the pecuniary concerns; Mr. Henry T. Anthony superintends the chemical department. Col. Vincent M. Wilcox, who gallantly served his country during the late war, has been recently admitted as a partner in this firm, together with Mr. Badeau. These gentlemen have grown into usefulness under the training of the Messrs. Anthony, and bring into the business large capitals of youthful enterprise and energy. An infusion of young blood works miracles in all systems. The *Photographic Bulletin*, a monthly periodical, is issued by this firm. It has a circulation

of five thousand monthly. It is edited by Mr. H. T. Anthony. One can hardly repress a smile as he departs from this great establishment, when he considers that all this combination of money, brains, and labor, is to promote the traffic in captive sunbeams! Gulliver discovered a philosopher in Lagado who was endeavoring to extract sunbeams from cucumbers, but even this bold scientist never had the temerity to suggest a traffic in them. The fancy would have been too extravagant. Alas! the very elements are victims to rapacious commerce.

A FEW HINTS TO THE PUBLIC.

The sunbeam possesses three qualities—light, heat, and actinism. These qualities manifest their presence in connection with certain colored rays. The yellow rays are illuminating, the red are calorific, and the blue are chemical or actinic. It is the last mentioned which produces photographic effects. When in equal combination, these colors blend so as to lose their identity, and produce the perfectly white sunbeam. When the light is yellow, the illuminating power predominates and impedes the process of photographing. Hence it follows that the full glare of the sun is not most favorable for sun-painting. It is a popular belief that cloudy weather is unfavorable to the taking of portraits; this is erroneous, for, on the contrary, when the sky is overcast the yellow rays are obstructed, while the actinism is in freedom. All periods of the day are alike favorable to portraiture up to three o'clock in the afternoon. It has been demonstrated that the presence of the sun's light and heat are entirely useless in photographing, for photographs have been produced in utter darkness, the actinic rays only being permitted to enter.

APPROPRIATE COSTUME.

The perfection of a portrait depends on many accessories, not least among which is that of costume. The sitter should be environed with a harmony of colors which should also harmonize with the complexion and character of the person. Every simple rustic maiden recognizes that she appears better to herself when arrayed in garments of certain colors. This is not owing to a caprice of fancy, but is in accordance with the dictates of propriety. Mr. M. A. Root, in his

charming book, to which I am greatly indebted for varied and valuable information, makes the following suggestions on the subject of dress: A large, stout person should dress in black, as that tint apparently diminishes magnitude. Inversely, a small person should garb herself in white; one favored with an excess of bloom on the cheeks, should environ them with materials of a deeper red; a lady of sallow complexion should wear a bonnet of transparent white; a pallid complexion is benefited by contrasts of pale green; a complexion like the peach appears best in company with light blue, light green, or transparent white. These effects are due to the "harmony of analogy" and "harmony of contrasts," which Dame Nature, the matchless *modiste*, so studiously observes when she invests her work with robes of grace. In those sombre precincts of gloom—the Arctic regions—every object is draped in subdued livery, as appropriate to the scene of mourning; but in the tropics, where the seasons hold a festival, everything is in gala array.

THE GEM OF A PHOTOGRAPH.

A gem of a photograph is as rare as a brilliant of the first water. The perfect photograph should possess the qualities of depth, breadth, solidity, transparency, delicacy, and precision of details. The tints should be softly and gradually graded, which gives brilliancy. The proper distribution of the lights and shades comprehended by the term *chiara-oscuro* requires the skill and taste of a consummate artist. All depends on the "poser" or the operant who postures the sitter. He must not only be an accomplished artist, but an excellent judge of human nature. Mr. Kurtz, who is perhaps the most perfect poser in the profession, invariably inquires of the person to be portrayed, "Which side of your face is the best?" for, to the astonishment of the multitude of persons, every face has its inequalities, and no two sides are alike. Mr. Kurtz likewise ascertains the vocation of the sitter, while his cultivated eye is quick to discern shades of character. His great aim is to invest the portrait with the individuality of the original, not merely to map the face, but to depict the lineaments of the soul within. The face is made up of hills and valleys, which

are haunted by fleeting lights and shadows. It is these which create expression. A twist of the body controls the expression. The form may be imitated in the pictures, but the expression will be that of a caricature. The elevation of a hand, or a turn of the head, may change the appearance of the staid divine so that he will look like a highwayman. It is in the poser's power to make your portrait perfect as an image of the features; to distort you into a Caliban, or to render you as beautiful as an Apollo. His great aim is to make truth to tell "a flattering tale." Light coming from different directions, and striking the countenance at different angles, produces widely divergent facial effects. Light falling equally on the sides of the face will make it appear as round. When the light strikes the front and also the sides, the surface presents a flat appearance. For dark complexions, it is best to expose it to a full focus obtained from the concentrated bundle of rays. For blondes diffused light is preferable. Beauty, after all, is but a graceful blending of form and color, and the poser wields a magic wand which commands them both. But a mere manipulator can not accomplish this feat; it requires an artistic genius, trained by study and strengthened by observation. This suggests the idea that an academy should be founded for the purpose of educating photographers. The accomplished photographer should be an expert chemist, a cultured artist, and a skillful mechanic. It is to be regretted that too often the title of photographer is obtained by the ownership of a camera and through the senility of Old Sol. A practice has recently been introduced of "retouching" or "finishing" with crayon, lead pencil, or india-ink. The touch of an expert's pencil may and often does improve a portrait, but too often the license is abused. The value of a portrait consists in its truthfulness. Beauty, however desirable, is not the desideratum in a portrait when it does not exist in the type. Faces, not masks, are wanted. Sometimes the image of a deformity is cherished as a fond memento, for love is proverbially blind to faults. The eccentricities of cast of countenance constitute the landmarks of identity, and the portrait which does not express them, is not a true

likeness. Would you have retouched the intellectual wrinkles of Plato, the frown of Nero, or the wart of Cromwell? No, emphatically no! we would preserve every furrow in its integrity as indices to character. This practice is more honorable in its breach than its observance, and hereafter no photographer should offer himself as a manufacturer of beauty and a hireling of falsehood.

THE FUTURE OF PHOTOGRAPHY.

Great as has been the progress made in the past, it is hoped that time will work new miracles. Although by means of collodion instantaneous pictures are obtained, yet a more sensitive agent is demanded, so as to keep pace with the very motion of life. That chemistry will reveal some of its servants as being capable for this employment, it is not unreasonable to expect. The great desideratum is to image motion, as the moving throng, the prancing steed, the dash of foam, and the rock-beaten surf. Thus far an approximation has been made in depicting instantaneous effects. Photographs have been made in the twentieth part of a second, but only with small instruments, because it is easier to make a small lens perfect than a large one. Mr. Henry T. Anthony has taken the picture of a man running across the field of the instrument, so that one foot was on the ground and the other in the act of descending, producing the effect of the man being poised in the air. But none but a consummate operant could accomplish this difficult feat. Although lenses can not be made of greater power, yet they can be made of greater perfection. Improvements are being rapidly made in the construction of lenses; in fact, to such an extent are lenses superseded, that a Philadelphia photographer suggests that all the old lenses be collected, melted, and made into a monument in honor of Daguerre. Another want generally felt is the reduction in the expense of material. In the carbon process, the cost of material is reduced, but that of labor is increased. The future may possibly afford the means to obtain permanent pictures of objects in their natural colors. Although natural colors can be photographed, they fade as soon as exposed to the action of light. The future may possibly furnish a "fixing" agent to render the colors enduring. It was for a long

time doubtful whether photographs could be made by the moon's light, but it is now an accomplished fact. Photographs have been made by means of the moon's light, but of an inferior quality. A more sensitive agent may be revealed in the future which will permit improvements to be made in this direction.

Landscape photography in America has not advanced as much as the other branches of the art, and should be cultivated. Judg-

ing by the great progress made by this art since its invention, covering the brief period of thirty-two years, it is reasonable to expect that the future will enlarge its sphere of usefulness and extend its powers. Photography is still so youthful, and has achieved so much, that the prophet might be justified in predicting extravagantly, and yet the realization of his wildest dreams might not compass the fulfillment of its destiny.

Physiognomy, or Signs of Character.

Of the soul, the body form doth take,
For soul is form, and doth the body make.—Spenser.

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONTINUED FROM OUR APRIL NUMBER.]

NATIONAL PECULIARITIES IN THE FORM OF THE HEAD.

SIR DAVID WILKIE was one of my earliest pupils, having attended a course of my lectures on anatomy, as connected with design. On returning from the Continent in August, 1840, I found him preparing for a journey; and he made me guess whither he was going. To Rome?—no. To Greece?—no. Surely not to court fortune in India?—no. He was setting off to the Holy Land, to study there an Eastern people. In this, he displayed that energy which ever accompanies genius. How much of character, in feature and costume, would he not have thrown into his future pictures! Here we have a lesson from one entitled to sway our opinion on his art, of the importance of a knowledge of national forms to the historical painter. It is for this reason that I introduce a slight account of the varieties of the human head, depending on national peculiarities. It may assist the artist in the study of such natives of foreign countries as he may chance to meet with.

Even in the most admired productions of art, I find little to which I can refer for elucidating this subject. Sculptors and painters have been too commonly content to characterize an inhabitant of the East by a tuft of hair on his crown; or an African, by a

swarthy face. There is a late publication that illustrates the question of national peculiarities in a very interesting way,—a folio volume which contains accurate portraits of the skulls of all the American races, from the old inhabitants of Mexico and Peru to those of the farthest north.*

In considering the extraordinary collection of skulls in this work, with the view of marking the relation between the form of the head and superiority of mind, in men of cultivated intellect, as contrasted with those leading a savage life, it must be acknowledged that much is wanting. Although there can be no objection to the mode adopted by the writer of estimating the actual mass of brain, yet his measurements ought to have been made in comparison with the dimensions of the whole body. If the cavity of the skull is to be gauged,—if the quantity of sand or of seeds, which different crania are capable of containing, is to be measured, the comparison will not be satisfactory, unless the measurement of each be contrasted with that of the face and of the body; and be also examined with respect to the proportions of the brain itself, or its form.

Again, it is taken for granted that we who exercise our best faculties within the four

* "Crania Americana," by Dr. Morton, Professor of Anatomy in Pennsylvania College.

walls of a house, must have a development of brain beyond what the free-dweller in the plains or forests of what is termed a new country can possess. I believe that man, in his state of nature, has imposed upon him the necessity of bringing into operation quite as many faculties of mind as the man at his desk; and that, from the brain being exercised in every use to which the external senses are put, its volume is not inferior to that of the individual in civilized life. We must take along with us this consideration, that the exercise of our external senses infers an accompanying activity of the brain: that of the nervous apparatus appropriated to the senses, it is the exterior part alone that is given to the eye, ear, nose, tongue: the internal part, forming the sensorium, is in the brain. Remembering this, and that the powers exercised by the savage are not instincts, as in the brutes, but operations of the mind calling the brain into action, I am unwilling to grant that any measurable deficiency in its mass, as a whole, is likely to be perceived. Were it really so, we should find the gamekeeper inferior to his master in a greater degree than my experience warrants.*

Every one must have observed among those with whom he lives, that there is as much variety in feature, stature, color, hair, beard, etc., as there is in expression of countenance; and a very little philosophy will indicate the necessity of such varieties for the constitution of society. But in regard to

[* It is certainly apparent that the brain of the forester or the Indian is exercised through perception and force more than through reflection and moral sentiment; hence the lower part of the forehead and the base of the middle part of the brain are much more largely developed in the Indian than in the man of culture at his desk. The latter has to study the laws of trade, commerce, manufactures, social life, men, and measures. He is not, like the Indian in the forest, merely stepping stealthily, using his Secretiveness and Cautionness, and giving sharp attention to every sound of game in the thicket; he is not following trails like the Indian, who will see among the dry leaves the tracks of the bear, and tell his size, and how long since he passed; this is mere perception, while the man at the desk reasons with the upper part of the forehead—exercises the moral and imaginative and inventive faculties in the top-head and upper side-head. Moreover, the mere measurement of the internal contents or absolute area of a skull, does not tell whether the largest development be in the back part of the head, in the social region, as among negroes, or whether it is in the intellectual or moral region. Phrenology is the only true guide in the study of ethnology or art.—Ed.]

national peculiarities, although the distinctions between individuals of a particular country are, doubtless, in many instances, as great as between the people of one country compared with another, yet there are certain forms of head, or casts of feature, or peculiarities of hair and complexion which characterize different nations.

We need not here enter into the question, how these distinctions have been produced. It would require much critical examination to decide whether national peculiarities of form are owing to an original provision, by which the structure changes, and acquires distinctive characters under the influence of circumstances—such as of the various climates to which the first families were exposed, on their dispersion from one center; or whether there are truly distinct races which had a conformation and constitution from the beginning, suited to the regions for which they were destined, and to which they were blindly driven.

All testimony agrees in showing that mankind was first planted in Western Asia; there, in the valleys, perpetual summer reigns; there the vegetable productions best suited to man's nourishment are most abundant; there are the animals, in a state of nature, which are led by their instincts to yield themselves up to his use—the horse, the ass, the cow, the sheep, the goat, the camel, the dog; and there the climate is so favorable to the human constitution, that even now we look to these countries for examples of perfection, both in feature and color, of man himself.

From this part of the globe the varieties of man, distinguished as to exterior form and complexion, may be traced divergingly—to this point the sciences and arts may be followed back; and the study of the derivation of tongues, and of the grammatical construction of languages, does not negative the conclusion, but rather indicates that this part of the earth was the center from which the nations spread.

The grouping of mankind into races has occupied the ingenuity of many naturalists and physiologists from the time of Buffon and Linnæus to the present day; but we rest principally on the authority of Blumenbach. In the valleys of the Caucasus, between the

Black Sea and the Caspian, we may distinguish in the Caucasian family those features which, according to the views just presented, we should say were the nearest to perfection. The skull is large and fully developed in front; the face is small and the features well-proportioned; the forehead is elevated; the nose arched or raised; the teeth perpendicular in their sockets; the chin round, and the lips full of expression; the skin fair, the eyes dark, the eyebrows arched, the eyelashes long, and the hair varied in color. The Circassians have long been noted for the beauty of the women, and for the imposing stature, elegance, and activity of the men; and the Georgians and other tribes are remarkable for personal beauty.

From this centre, proceeding westward, we recognize the Europeans. The original in-



FIG. 1.—GREEK GIRL.

habitants of Thessaly and Greece are designated as the Pelasgic branch—that enterprising and migratory people who at an early period extended to Italy, and from whom descended the Etruscans. The Hellenes, or Greeks, receiving letters from the Phœnicians, surpassed all the nations of antiquity in philosophy, literature, and art. The Greek face is a fine oval, the forehead full and carried forward, the eyes large, the nose straight, the lips and chin finely formed,—in short, the forms of the head and face have been the type of the antique, and of all which we most admire. The modern Greeks are still distinguished by athletic proportions and fine features.

The Roman head differs from the Greek in

having a more arched forehead, a nose more aquiline, and features altogether of a more



FIG. 2.—PLATO.

decided character; and this is even apparent in the busts of that people, as exhibited in the two splendid volumes of Visconti. The remarks of Bishop Wiseman on this subject are important, as his lectures were delivered in Rome, and to persons who had only to step out of the college to ascertain their accuracy. Travelers have often stated that the



FIG. 3.—JULIUS CÆSAR.

countenances of the population beyond the Tiber exactly resemble those of the Roman

soldiers on the column of Trajan; but Dr. Wiseman observes correctly that any one slightly acquainted with art will soon be satisfied that the model on these historical monuments is really Grecian, and can give no aid in ascertaining the physiognomy of the ancient inhabitants of Italy. He bids us look to the busts and reclining statues of the ancient Romans carved on the sarcophagi, or to the series of imperial busts in the Capitol, where we shall discover the true type of the national figure, viz., a large flat head, a low and wide forehead, a face broad and square, a short and thick neck, and a stout and broad trunk; proportions totally at variance with what are generally considered to be those of the ancient Roman. Nor have we to go far, if in Rome, to find their descendants; they are to be met with every day in the streets, principally among the burghesses or middle class.*

The German race has been spread from east to west over a great part of Europe, blending with the Celts. It is separated into the Teutonic and Slavonian families; their military enterprises form the history of the



FIG. 4.—MONGOLIAN.

darker ages, when they came down upon the Roman Empire. Other hordes mingled with

* "For my part, I looked for the type of the Roman soldier among the Galleotti. There was a body of these condemned men, chained together, who were marched every evening from their work of rebuilding the great basilica of St. Paul's, beyond the walls. This church, which was burnt, stands some way out of Rome, and I walked beside and behind these bands; and finer figures are not to be conceived; their loose dress, and the gyves upon their legs, gave to their air and attitude something formidable. They seemed fit for the offices of a tyrant, and to subdue the world. I must ever remem-

ber one evening, when I saw these men, with their mounted guards, passing under the Arch of Titus and the broad shadow of the Colosseum. Dr. Wiseman says, in regard to the sculptures on that arch, that the profiles of the soldiers show that there was a rule, or model, adapted to the common men, and from which the artist might not depart: while the figure of the emperor, seated in his chariot, forms a strong contrast to them. Though his features are now quite effaced, enough remains of the outline to show the full, heavy face and bulky head of a true Roman."—*Notes from Journal.*



FIG. 5.—ARAB.

a race which is now diminished to the remnant living in the mountainous districts of the extreme west of Europe.

The Mongolian Tartars occupy a great part of the north of Asia and Europe. The eyelids of this people are oblique, the nose is small and flat, broad toward the forehead; the cheek-bones are high, the chin short, and the lips large and thick; the ears are flat and square; the general form of the head round. The Mongol Tartar tribes have become mixed with the neighboring nations, and exhibit a variety of physiognomy. Hordes of this people invaded China, and, settling in the north of that great empire, have blended with the original Chinese.

To the northwest they mingled with the polar races, and have merged in the Kamtschatskans and Tungusians; the Huns, whose incursions into more civilized Europe are recorded in history, were Mongol Tartars. The primitive Turks were also of the same race; but, by overrunning Circassia, Georgia, Greece, and Arabia, their physical character

ber one evening, when I saw these men, with their mounted guards, passing under the Arch of Titus and the broad shadow of the Colosseum. Dr. Wiseman says, in regard to the sculptures on that arch, that the profiles of the soldiers show that there was a rule, or model, adapted to the common men, and from which the artist might not depart: while the figure of the emperor, seated in his chariot, forms a strong contrast to them. Though his features are now quite effaced, enough remains of the outline to show the full, heavy face and bulky head of a true Roman."—*Notes from Journal.*

has been changed, and they have become a handsome people. The open nostril and short nose which mark the Turkish countenance still betray their original extraction; their eyes are dark and animated, and the whole face is expressive and intelligent.

The Chinese skull is oblong, the frontal bone narrow in proportion to the width of the bones of the face. Accordingly the countenance is flat and the cheeks expanded; the eyelids are not freely open, and are drawn obliquely up toward the temples; the eyebrows are black and highly arched; the nose is small and flattened, with a marked depression separating it from the forehead; the hair is black and the complexion sallow.

The Malay race is scattered through the Indian Islands, Sumatra, Java, Borneo, Amboyna, Celebes, the Philippines, Moluccas. The forehead in the Malay is prominent and arched, but low; the orbits oblique and oblong, the nasal bones broad and flattened, the cheek-bones high and expanded, the jaws projecting. The head is, altogether, large;



FIG. 6.—MALAY.

the mouth and the lips protrude; the nose is short, depressed, and flattened toward the nostrils; the eyes are small and oblique. They are of a brown complexion, varying in the different tribes.

Some uncertainty prevails as to the race to which the ancient Egyptians belonged. This has arisen from the difficulty of reconciling the early and extensive knowledge of that



FIG. 7.—MUMMY HEAD.

people with the acknowledged deficiency of capacity in the negro. We might expect that the mummies and drawings in their pyramids and tombs should have long since decided the question; but the position of Egypt may account for the obscurity. Being on the confines of two great continents, the Egyptians became early a mixed people. The skull is found to be well formed and unlike that of the Ethiopian. The probability is, that the negro was then, as now, a subjugated race.*

The Greek applied the terms *Ethiop* and *Indian* to all the dark people of the south. By *Ethiopian* we now correctly understand the different races which inhabit the interior of Africa, extending from the south of Mount Atlas and Abyssinia to the country of the Caffres and Hottentots.

The general character of the negro countenance is familiar to us. Of the great antiquity of the race there can be no doubt. When, indeed, the effigy of the negro is found depicted on the ancient walls of Egypt, and vessels are dug up, the characters on which are read by modern Chinese, we may well despair of obtaining anything like a satisfactory history of the spread of nations and the settlement of mankind in the different regions of the globe. The depression of the forehead and compression of the temples, which are distinctive of the Africans, although there be splendid examples of fine form among

* Blumenbach thinks that he can discover among the mummies the heads of the Ethiopian, the Indian, and the Berbers. Denon conceives that the female mummies indicate that the women of ancient Egypt had great beauty.

the nations of that continent, mark them as a peculiar race.*

Diverging still from the presumed central origin of mankind, we find the Polynesian family in the islands of the Pacific Ocean. The inhabitants of these isles are of middle stature, athletic, with heavy limbs. Their faces are round or delicately oval; the nose is well formed, straight, or aquiline, sometimes spread out, but not having the flatness of the negro; the forehead is low, but not receding; the eyes black, bright, and expressive; the lips full, and the teeth fine.†

In America, the same difficulties present themselves in relation to the origin and prop-

first, a race called Toltecán, belonging originally to Mexico and Peru, which, from the



FIG. 9.—BLACK HAWK.



FIG. 8.—NEGRO HEADS.

agation of races as in the Old World. The most recent inquiries authorize the distinction of two families inhabiting America;

* The great families of mankind are distinguished by color as well as form and features: the Caucasian by white; the African by black; the Mongolian by olive, tending to yellow; the Malay by tawny; the American by brown, or nearly copper hue. The color of the hair, and that of the iris, partake of the color of the skin. The Caucasian, with fair complexion, has red, brown, or light-colored hair, and the eyes of different shades of gray and blue. In those of darker complexion, the hair is black and the eyes dark. In the Mongol the hair is thin, stiff, and straight; in the European, soft, flexible, and flowing; in the negro, thick-set, strong, short, and curly. But in all races there spring up occasional varieties.

† It is amusing to find voyagers making distinctions here between the plebeian and the aristocratic classes. But it is so everywhere. Among the Lybians and Moors, as in the countries of Asia and Europe, the comforts and luxuries of life improve the physical condition of man.

shapes of the skulls found in the graves, and the accompanying relics, give evidence of greater civilization than belongs to the present natives; and secondly, a people which, extending over the greater portion of the vast continent, embraces all the barbarous nations of the New World, excepting the polar tribes, or Mongolian Americans, which are presumed to be straggling parties from Asia, such as the Esquimaux, Greenlanders, and Fins.

In the native American there is no trace of the frizzled locks of the Polynesian or the woolly texture on the head of the negro. The hair is long, lank, and black; the beard is deficient; the cheek-bones are large and prominent; the lower jaw broad and ponderous, truncated in front; the teeth vertical



FIG. 10.—INDIAN WOMAN.

and very large; the nose is decidedly arched, and the nasal cavities of great size. They

ought not to be called the copper-colored race. The color is brown, or of a cinnamon tint. As in the Old World, the color varies, and the darkness does not always correspond to the climate or vicinity to the equator.

Of the imperfect sketch of the varieties of mankind which I have here presented, every sentence might be the text of a long essay. But in this, as in the whole volume, I have attempted only to awaken attention, and to make the reader an observer of what may pass before him; giving him the elements on which his ingenuity or acumen is to be employed in his intercourse with society.

ESSAY III.

ON THOSE SOURCES OF EXPRESSION IN THE HUMAN COUNTENANCE WHICH CAN NOT BE EXPLAINED ON THE IDEA OF A DIRECT INFLUENCE OF THE MIND UPON THE FEATURES.

"The heart of a man changeth his countenance, whether for good or evil."—*The Son of Strach.*

"I do believe thee;
I saw his heart in his face."—*Shakespeare.*

In the human countenance, under the influence of passion, there are characters expressed and changes of features produced which it is impossible to explain on the notion of a direct operation of the mind upon the features. Ignorance of the source of these changes of the features, or inattention to the cause which produces them, has thrown an obscurity over the whole of this subject, which it is my wish to remove.

If, in the examination of the sources of expression, it should be found that the mind is dependent on the frame of the body, the discovery ought not to be considered as humiliating, or as affecting the belief of a separate existence of that part of our nature on which the changes wrought in the body are ultimately impressed. Since we are dwellers in a material world it is necessary that the spirit should be connected with it by an organized body, without which it could neither feel nor re-act, nor manifest itself in any way. It is a fundamental law of our nature that the mind shall have its powers developed through the influence of the body; that the organs of the body shall be the links in the chain of relation between it and the material world, through which the immaterial principle within shall be affected.

As the Creator has established this connection between the mind and external nature, so has He implanted, or caused to be generated in us, various higher intellectual faculties. In every intelligent being He has laid the foundation of emotions that point to Him, affections by which we are drawn to Him, and which rest in Him as their object. In the mind of the rudest slave, left to the education of the mere elements around him, sentiments arise which lead him to a Parent and a Creator. These feelings spring up spontaneously, they are universal, and not to be shaken off; and no better example than this can be given of the adaptation of the mind to the various relations in which man is placed, or one that tends more to raise in us a conception of the Author of our being, and increase our estimation of ourselves, as allied to Him.*

This it is, perhaps, necessary to premise, when I am about to prove the extensive influence of the corporeal on the intellectual part of man.

In examining the phenomena of the mind, philosophers have too much overlooked this relation between the mental operations and the condition of the bodily frame. It appears to me that the frame of the body, exclusive of the special organs of seeing, hearing, etc., is a complex organ, I shall not say of sense, but which ministers, like the external senses, to the mind; that is to say, as the organs of the five senses serve to furnish ideas of matter, the framework of the body contributes, in certain conditions, to develop various states of the mind.

In the affections which we call passions or emotions, there is an influence which points to the breast as the part where they are felt. Some have asserted that they are seated in the bowels; and the sensations I am about to describe have been arrayed as proofs that the affections exist in the body. But that, I affirm, is impossible. They are conditions of the mind, and can not be seated in the body, although they both influence and are influenced by it.

We have learned enough to know that the impressions communicated by the external

[* These spontaneous feelings could not be awakened unless the mental organization itself contributed to them by special native faculty.—Ed.]

organs of sense belong really to the mind; and there can be no doubt that there is a mutual influence exercised by the mind and frame on each other. This is not asserted on the mere grounds that each affection which is deeply felt is accompanied by a disturbance in our breast; nor on the language of mankind, which gives universal assent to this proposition; but it may be proved by circumstances of expression, in which we can not be deceived. I shall make it manifest that what the eye, the ear, or the finger is to the mind, as exciting those ideas which have been appointed to correspond with the qualities of the material world, the organs of the breast are to the development of our affections; and that without them we might see, hear, and smell, but we should walk the earth coldly indifferent to all emotions which may be said in an especial manner to animate us, and give interest and grace to human thoughts and actions.

By emotions are meant certain changes or affections of the mind, as grief, joy, astonishment. That such states or conditions of the mind should in any degree pertain to the body, may not, perhaps, be willingly admitted, unless we take along with us that the ideas of sense, as light, sound, or taste, are generated by the organs of the senses, and not by anything received and conveyed by them to the sensorium. It is ascertained that the different organs of the senses can be exercised, and give rise to sensation and perception, when there is no corresponding outward impression; and the ideas thus excited are according to the organ struck or agitated,—that is, the same impression conveyed to different organs of sense will give rise to a variety of sensations; as light, when the eye is struck; sound, when the ear is struck; and so on with the other organs, the sensation corresponding with the organ which is exercised, and not with the cause of the impression. A needle passed through the retina, the organ of vision, will produce the sensation of a spark of fire, not of sharpness or pain; and the same needle, if applied to the papillæ of the tongue, will give rise to the sense of taste; while if it prick the skin, pain will follow. This law of the senses is arbitrarily or divinely ordered; it might have been otherwise. Accordingly, when we

observe that the organs of the senses operate in producing specific ideas, independently of their own peculiar exciting causes, we can comprehend better how other organs of the body may have a relation established with the mind, and a control over it, without reference to outward impressions.

Let us consider the heart, in its office of receiving the influence of the mind, and of reflecting that influence.

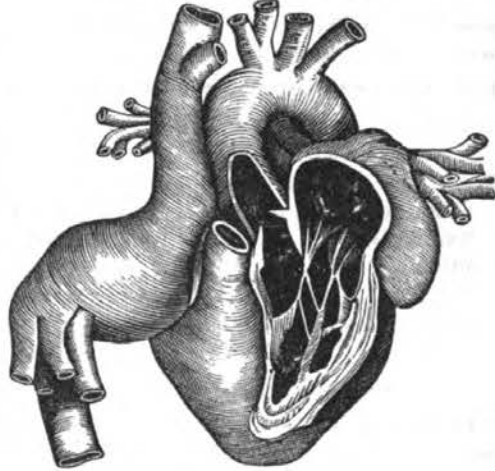


FIG. 11.—THE HEART.

It may, in the first place, be observed, that there is hardly an organ of the body limited to one function; all are complex in their operation. How many offices, for example, are performed by the lungs? It is a singular fact in the history of physiological opinions that the heart, an organ the most susceptible of being excited by the agitations or derangements of the body, should have been considered at one time as insensible. And yet in one sense it is true that it is so. To actual touch the heart is insensible, as was exhibited to the illustrious Harvey, in the person of a young nobleman who had the heart exposed by disease. This single circumstance, had there been no other evidence, should have earlier directed physiologists to a correct view of the matter, from its proving that the internal organs are affected and united by sensibilities which are altogether different in kind from those bestowed upon the skin. The sensibility of the external surface of the body is a special endowment adapted to the elements around, and calculated to protect the interior parts from in-

jury. But though the heart has not this common sense of touch, yet it has an appropriate sensibility, by which it is held united in the closest connection and sympathy with the other vital organs, so that it participates in all the changes of the general system of the body.

But connected with the heart, and depending on its peculiar and excessive sensibility, there is an extensive apparatus which demands our attention. This is the organ of breathing: a part known obviously as the instrument of speech, but which I shall show to be more. The organ of breathing, in its association with the heart, is the instrument of expression, and is the part of the frame by the action of which the emotions are developed and made visible to us. Certain strong feelings of the mind produce a disturbed condition of the heart; and through that corporeal influence, directly from the heart, indirectly from the mind, the extensive apparatus constituting the organ of breathing is put in motion, and gives us the outward signs which we call expression. The man was wrong who found fault with nature for not placing a window before the heart, in order to render visible human thoughts and intentions. There is, in truth, provision made in the countenance and outward bearing for such discoveries.

One ignorant of the grounds on which these opinions are founded has said, "Every strong emotion is directed toward the heart; the heart experiences various kinds of sensation, pleasant or unpleasant, over which it has no control, and from thence the agitated spirits are diffused over the body." The fact is certainly so, although the language be figurative. How are these spirits diffused, and what are their effects?

We find that the influence of the heart upon the extended organ of respiration has sway at so early a period of our existence that we must acknowledge that the operation or play of the instrument of expression precedes the mental emotions with which they are to be joined, accompanies them in their first dawn, strengthens them, and directs them. So that it is not, perhaps, too much to conclude that from these organs moving in sympathy with the mind, the same uniformity is produced among men in their internal feelings, emotions, or passions, as there exists in their ideas of external nature from the uniform operations of the organs of sense.

Let us place examples before us, and then try whether the received doctrines of the passions will furnish us with an explanation of the phenomena, or whether we must go deeper and seek the assistance of anatomy.

[TO BE CONTINUED.]

CHARACTER IN FACES—CHOOSING A SERVANT.

I HAVE learned by personal experience that it is not safe for unskilled people to trust to the face as an index of character. How often in times past I have said, "I can trust his face," "Such a face as *that*, rest assured, can be relied on," etc., when in almost every case the owner of the seemingly noble physiognomy proved to be quite unworthy the trust his face inspired. There are some people, however, who seem to have a natural talent for reading character in the face. I have an aunt who is a born physiognomist. I have rarely known her to be mistaken in her most summary judgment of an individual. A stranger's face is to her like an open book wherein she sometimes reads wonderful matters. She hires her servants on recommendation of their faces, five minutes' scrutiny being all she requires to determine their capacity, honesty, and whatever else goes to make up a good do-

mestic. I was a member of her family for some time, and a patient pupil under her tutelage, but owing to my great lack of that faculty phrenologically termed Human Nature, I failed to gain one iota of her knowledge in this respect. Yet my Self-Esteem, in which I am not lacking, would not let me believe that I was not as well fitted to pass judgment on strangers as herself. Repeated failures could not convince me to the contrary for a long time. Once during my aunt's absence, a pleasant-faced girl applied for the vacant place of nursery maid in her family. I read in her face all the virtues essential for the situation, and told her there was no doubt but that my aunt would engage her. With this encouragement she departed, and came again next day; but to my mortification and chagrin, the moment my aunt saw her she decided she would not suit. She did not even so much as glance at the well-indorsed

recommendations the girl handed her. "Now, won't you tell me why you sent her away?" I asked the moment she was gone. "Such refined manners you seldom see in girls of her class, and then her face, what fault *could* you find with that? And then you did not even look at her recommendations!"

"A hundred recommendations would avail nothing with me with that peculiar droop of the eyelid, that nose, that chin. I would not trust my baby in her care for one day; she is not fit to be trusted with children." And subsequent disclosures regarding the poor girl proved that my aunt was right.

When I married, and went to housekeeping on my own responsibility, some miles distant from the home of my aunt, the attempts I made in carrying out some of her instructions in this peculiar line, were ludicrous in the extreme. But I was not dismayed or discouraged. I felt that I could still detect innocence under the guiltiest guise, and guilt under the most innocent. My husband willingly gave into my hands the delightful task of engaging our maid-of-all-work, thereby acknowledging my superior judgment at the outset, and keeping himself clear of all responsibility in the matter. I engaged at once, on the strength of my remembrance of my aunt's rules, a benevolent-looking, mild-eyed, sweet-voiced creature, as my first kitchen girl. She had a most symmetrical head, every organ being nicely balanced in my estimation. If any faculty predominated, it was her Benevolence, I thought. Yet before the week was out I grew absolutely afraid of her, and scarcely dared give her any directions in the mildest way. She proved to be the most malicious, overbearing person I had ever seen. I dared not dismiss her, and was obliged at last—I am ashamed to confess it—after being ruled by her three months and longer, to resort to the subterfuge of absence, and send her her discharge in writing. But I did not get rid of her so easily. She bore down upon me as soon as I returned with the whole weight of her terrible personality, and demanded explanations. Then I was forced to wage war; and though I came off victorious after a long siege, I paid dearly for it in the three months' sickness that followed.

I was more egregiously deceived, however, in the character of the next one who took her place. She was very respectful in her deportment, reverential almost. I could find no fault in that respect during the whole time she remained with me. Before I engaged her services, she came up to my chamber where I was

recovering from the effects of my fight with her predecessor, bathed my head so softly, and combed out my tangled locks so gently, and tidied up the disordered room so deftly and quietly, that I said to myself, "Here is a treasure indeed! I must secure her; and what a good face she has! just such an one as my aunt would like, I know! How quietly she goes about too, just like a cat. I do so like a noiseless person about me,"—and engaged her on the spot. I liked her for a long time; in fact, all the while she stayed with me I liked her. She seemed a most excellent person in every respect, and yet she *stole* enough from me to set up a small haberdasher's shop. She appropriated my stockings and handkerchiefs; she fashioned out of my best nightgowns undergarments for herself, sewing on them under my very nose. She cut up my table linen into towels for her sister's baby's use, and did many other equally preposterous things right before my eyes; and though I was called by my friends a most careful housekeeper for a young one, it was not till she walked off one morning with my husband's watch and my grandmother's Government Bonds that I found out she had been robbing me at all.

After being deceived by at least a dozen different specimens of human nature that followed closely on each other's heels, it would seem that I should have begun to doubt my own ability to judge of character by the face alone. But I didn't begin to do any such thing. My husband came forward now and volunteered to aid me in looking up a good, reliable girl. I did not choose to accept his assistance. I did my own housework that winter, and when the summer came round my husband shut up our cottage and sent me to the seashore. Being more exhausted than refreshed when I returned in the autumn, I began to look about in the old way for new "help." My husband had heard of a "very nice" girl, and wanted me to go and see her. I went, and decided at once that I did not want her. My husband remonstrated. Everybody spoke well of her, he said; the family with whom she had lived a long time would not part with her for anything if they were not going out of the country. "But her face is against her. I should not dare to stay in the house alone one day with such a face," I said.

"Nonsense!" returned my better half. "She isn't handsome, to be sure, but what of that? I don't esteem beauty so highly as I did once. Goodness is what we want in a servant, not beauty

"Goodness with that face!" I exclaimed. "Look at her retreating forehead and shapeless lips! She is addicted to some bad habit, I know. Her eyes, too, stand out like door-knobs. I have told you what that denotes, and you can't bear a garrulous person about any better than I. I wonder what aunt *would* say to see such a person in our kitchen?"

Here my husband muttered something not very complimentary to my aunt, but I pretended not to hear it. I would not have the girl, and so the matter was decided.

Again through another winter I performed the household work, preferring to do it to trusting my husband's judgment in procuring help. In the spring I went down to visit my aunt. Her house seemed more nicely kept than ever, if possible; her kitchen was the perfection of neatness. I kept speaking of it.

"I have a most excellent girl," said my aunt. "It was a fortunate hour for me when I came

across her. A more capable, faithful, and trustworthy person I have never seen."

"Did you take her on the usual recommendation?" I asked. "Yes; you can see for yourself what a good face she has. I knew at first sight that she would suit me in every respect, and she has done so. There she comes. Look, and tell me if you ever saw a better face than her's."

Judge of my astonishment when the identical girl my husband had been so anxious I should secure the autumn previous came before my vision! I could not open my mouth, of course. I had nothing to say. My visit was abridged to a very few days. The first thing I did when I got home was to confess to my husband my solemn conviction that I was a fool. He did not seem to believe quite that, for he went into copartnership with me on the help subject, and we hunted up a very good kitchen girl together. MRS. C. C. FIELD.

Department of Our Social Relations.

Domestic happiness, thou only bliss
Of paradise that has survived the fall!
Thou art the nurse of virtue.

MISTAKES.

"MISTAKE," according to some authors, means "to take wrong," a definition which well applies to the mistakes of which I purpose to write, viz., the mistakes of taking wrong occupations or wrong positions in life.

A few Sabbaths ago I listened to the discourse of a clergyman whose corporal characteristics may be described as follows: head, low and broad; neck, short, and fitting the shoulders in a manner strongly suggestive of the trunk of an oak tree; chest, sufficiently capacious for any emergency of head and neck; abdominal viscera, correspondingly proportionate; extremities, in all respects adapted to wield successfully the entire muscular force manufactured by the above mentioned machinery; weight of this "harmonious whole," two hundred pounds.

Now, this clergyman, who believes "God *calls* his ministers and *gives* them the words he wishes them to speak," and who repudiates written sermons and modern theology, "gave out" the text, "He that hath ears to

hear, let *him* hear," and discoursed for an hour and a quarter upon the spiritual deafness of mankind in general. He stamped the floor with a weighty foot; he pounded the Bible cushion with his powerful fists, and he *made* (not let) his audience *hear* at least one acceptable word, the Amen!

A few evenings later I saw a youth of sixteen come into a house at about eight o'clock in the evening; he had gone out before daylight that morning, and had been all day hauling wood with an old, slow team of oxen, and the weather was very cold. He took off his ragged boots and shook the snow out of them, then went to a corner cupboard and returning with a book, sat down to dry his feet.

Supper was soon ready, but the other members of the family had scarcely more than commenced their meal, when this boy left the table and sat down by the fire, holding his book in one hand and a piece of bread in the other, intent upon reading while he ate. I naturally found myself in an inquiring state of mind, and my interrogations ran thus:

"What book are you reading, my boy?" "Irving's Columbus," was the reply. "Do you attend school?" "I have not since I was ten years old." "Do you read many books?" "I can not get many such books as I like. Mr. B— lends me his, but he is poor and can't buy many." "What books do you like?" "History, biography, and travels."

The next evening at sundown I was standing on a street corner, in a small, business-like town, when a stout, robust-looking boy, of perhaps twelve years, with his forehead wearing a large purple spot, and one eye badly swollen, passed me. At the same moment, two gentlemen (?), whom I learned were school directors, met a third at a crossing near where I stood. "Ah, hey! Smith," said one of the two to the third, "it's a pity the ruler that you broke over that boy's head hadn't been a piece of oak plank; perhaps 'twould have knocked a few brains into it." "By jolly! there's one thing certain, it could not have knocked any out, for the fool hasn't any," replied Smith. "That's the way to do it," responded the second of the two gentlemen before mentioned, "maintain your authority, Smith, and never mind the fuss they're making about it—we'll stand by you." "That boy's a perfect devil, besides being half a fool," rejoined Smith; whereupon the trio simultaneously ejected a small pool of tobacco juice upon the pavement, and after exchanging some further conversation, which I did not hear, separated with a coarse haw, haw, haw! on the part of Smith. The fancied reverberations of that laugh annoyed my meditations for half an hour afterward—meditations upon the mistakes of individuals and society in general.

"Mistakes everywhere!" I said. "And if I only held the reins of government of this world for a few days, I'd stop some of 'em—I'd send schoolmaster Smith to the lock-up to be dosed on bread and water for ninety days, and those two directors to the insane asylum till they should give decided indications of mental soundness. Then I'd start out that oak-necked, iron-fisted, brazen-lunged clergyman of last Sabbath to haul wood with that slow yoke of oxen, and I'd send that slender boy with the history of Columbus to college in quick time."

And so I have made a mistake, a great

mistake, in the presumption of even a thought of venturing my weakness among the complexity of this world's machinery. Therefore in all humility I hasten to fall back upon my former position, that of a passenger instead of an engineer, and content myself with pointing out some of the mistakes of life as I see them, hoping all the while that some philosopher will be kind enough to point out to the world a remedy for such mistakes. And perhaps the mistakes of parents in selecting occupations or positions for their children are as numerous and also as injurious to the children, as well as to society, as any other class of mistakes of which I might write. I know a boy, nine years of age, who seems, sometimes, completely fascinated with machinery, and has taken apart everything on his father's premises that has wheel, bolt, or screw, from the crank of the grindstone and the clock on the mantelpiece, to the reaper and sewing-machine, for the sake of seeing, as he says, "how it goes together." At school the teacher wonders how this boy can be so dull in arithmetic, since he is constantly busy with slate and book; but the teacher does not see the sketches of the washing-machine, fanning-mill, town pump, and steam engine that he rubs off each day before the hour of recitation. This boy has a brother Tom, two years younger than himself, whose only regret is that he was born without wings; and who is distinguished only for his persistence in following in the opposite directions of digging and climbing. He has been safely taken down so many times from the wind-mill, the liberty pole, and the steeple of the barn, that his mother has ceased saying, "He'll get his neck broke yet—I *know* he *will*." Tom digs the earth for toads, tumble bugs, and angle worms; lays them on a board in the sun, and then watches them to "see where they go to." Then he ensconces himself for an hour in the thick foliage of an evergreen, and watches the robin build her nest in an adjoining apple tree; and doubtless while I am writing this he is on the topmost branch of the tall cottonwood practicing his antics by personating the gestures of a black bird or brown thrasher. Now, these two boys already have the way of their future career marked out for them by their doting parents; the bounds

ries are defined and the stakes set for the inclosure of these young minds; and nothing short of strict conformity to the requirements of the inexorable will or ignorance of these parents will be satisfactory. The father of these children was educated for the ministry, but after failing in a four years' endeavor to find his labors successful, and losing health and courage, he came west, purchased lands at government prices, and is now a successful and wealthy farmer; and now he is going to visit "the iniquities of the fathers upon the children" by making his

oldest son a "sin offering" for his own shortcomings.

This boy is to be theologically educated, and is expected to make the ministry his highest aim of life; while Tom, as soon as he is old enough, is to be sent in for a printer's "devil," and expected to be turned out a first-class editor. Now, if these parents fail to realize their hopes in regard to these boys, will it be the fault of the boys in not adapting themselves to the positions chosen by the parents? or the fault of the parents in not choosing positions for which nature had adapted the boys?

ROBERT CHAMBERS, LL.D.

IT has been said with authority that the remarkable increase of popular literature which has been witnessed within the past fifty years has been due in great part to the labors of two brothers, William and Robert Chambers, of Edinburgh. The recent death of the latter has awakened a profound emotion on both sides of the Atlantic, as he, doubtless, had become the more widely-known of the brothers; indeed, it is not saying too much when we affirm that he was one of the most universally-known and best-respected Scotsmen of the generation now passing away.

Robert Chambers was born in the town of Peebles, in 1802—two years later than his brother William. His father was a respectable middle-class citizen, and, until he was twelve years old, Robert was educated at the grammar school, under a master who was a severe disciplinarian, but an excellent teacher of the classics. Then his father, having been unfortunate in business, removed to Edinburgh. For two years longer Robert went to school at a noted academy kept by Mr. Benjamin Mackay in West Register Street, where he made brilliant progress, but the family having meanwhile been reduced to poverty, he was compelled to begin the battle of life at the early age of fifteen, his brother William having already started for himself two years before. Mr. Robert Chambers gives some account of this part of his life in the preface to his collected works issued in 1847. He dwells on his intense devotion to books, and points out that his choice of an occupation was determined by this passion, "for I broke from home control at sixteen, preferring the poorest life among books to all ordinary courses of industry." In a letter, which possesses almost a painful

interest, addressed to Hugh Miller, in 1854, he gives some more details of his early struggles. Friends and kinsfolk, it would appear, all looked askance on the family when they sank into poverty; uncles and cousins, though in good positions, offered no assistance whatever. This aroused a feeling of bitterness in the youth's breast, which, had it not been softened by speedy success, might have hardened into permanent cynicism. "Till I proved that I could help myself," he says, "no friend came to me. The consequent defying, self-relying spirit in which at sixteen I set out as a bookseller, with only my own small collection of books as a stock—not worth more than two pounds (\$10), I believe—led to my being quickly independent of all aid; but it has not been all a gain, for I am now sensible that my spirit of self-reliance too often manifested itself in an unsocial, unamiable light, while my recollections of "honest poverty" may have made me too eager to attain worldly prosperity."

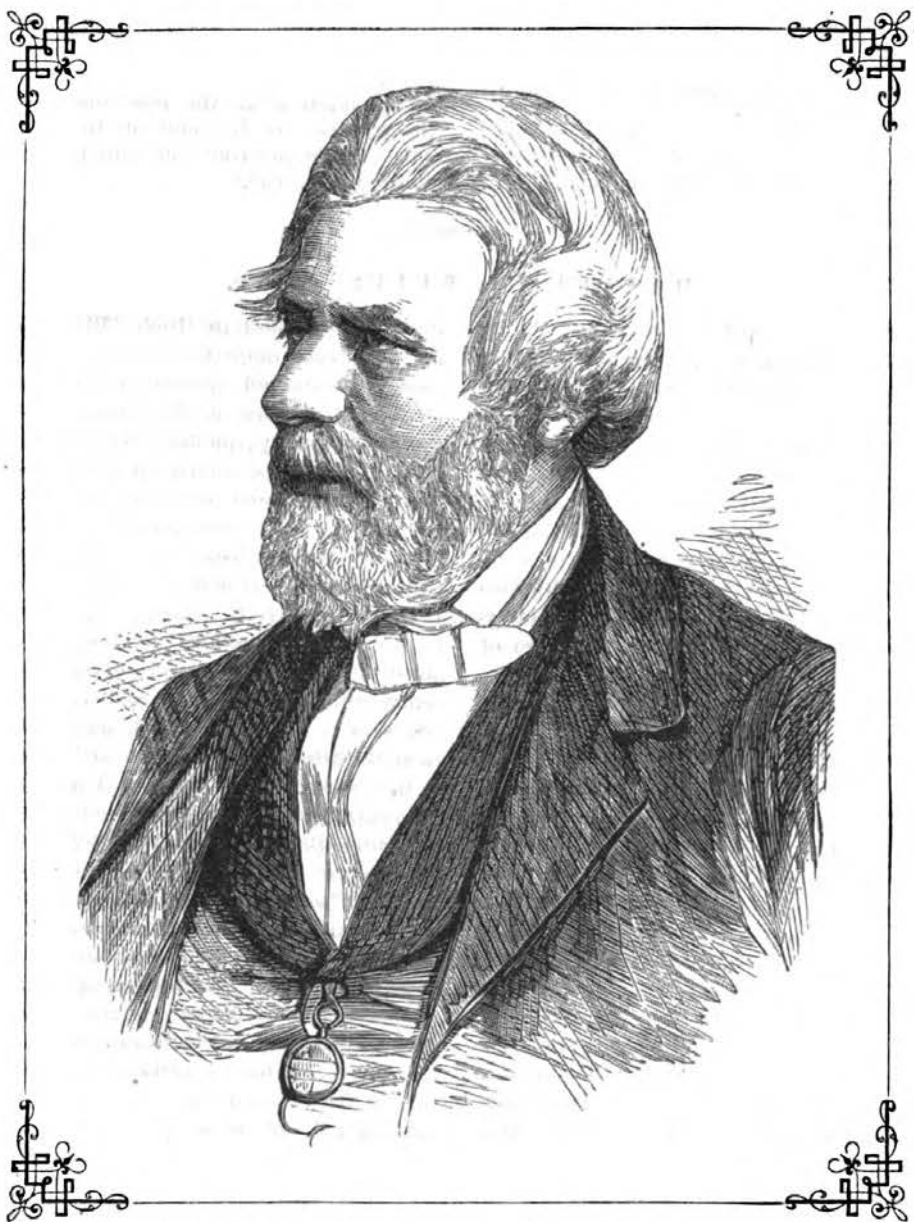
[This is often the case with persons having small or moderate Acquisitiveness. The painful memory of pinching poverty excites Cautionness unduly, and inclines one to lend all his energies to the acquisition of a competency, and he is put down as a money-getter by the unthinking. Whereas had his circumstances been less pressing in early youth, he would have manifested less desire to get riches.—ED.]

After some severe early struggles things began to look brighter. William Chambers had added printing to his bookselling business, and when his brother, who possessed a strong literary bias, a delicate sense, a keen eye for character, and a strong sense of humor, undertook to edit a small periodical called the *Kaleidoscope*, William set up and printed the sheets,

besides composing some of the pieces which he did not write, but transferred at once from his brain to the composing-stick.

This magazine affords strong proof of its author's subsequent powers, but it was discontinued at the end of 1821. Mr. Robert Cham-

which this book was welcomed encouraged him, when only twenty years of age, to compose his "Traditions of Edinburgh," many of the anecdotes in which he derived from Sir Walter Scott, with whom in his later years Robert Chambers enjoyed a lasting friendship.



PORTRAIT OF ROBERT CHAMBERS, LL.D.

bers' next literary venture was more successful. The Waverly Novels being then in the height of their fame, he wrote a volume entitled "Illustrations of the Author of Waverly," consisting of descriptive sketches of the supposed originals of the novelist. The warmth with

The first edition of the "Traditions," it may be observed, was executed both at case and press by William Chambers' own hands.

This work made Robert's reputation, and books now flowed in rapid succession from his pen. Among these may be mentioned "Walks

in Edinburgh," "Popular Rhymes of Scotland," the "Picture of Scotland" (composed after extensive excursions on foot), the "Histories of the Scottish Rebellions," "Life of James I.," "Scottish Ballads and Songs," and a "Biographical Dictionary of Distinguished Scotsmen." Besides writing these works, and attending to his regular business, Mr. Robert Chambers acted for some time as editor of the *Edinburgh Advertiser*. During this time his brother William was toiling on in his own way; he wrote the "Book of Scotland," and, in conjunction with his brother, the "Gazetteer of Scotland," a work involving immense labor.

For some time the brothers had been planning a grand literary *coup*, and on the 4th of February, 1832, appeared the first number of *Chambers' Edinburgh Journal*, six week before the *Penny Magazine*. Under a slightly altered title this periodical still flourishes hale and vigorous, and it is scarcely possible to overrate the pleasure and instruction it has conveyed during these nearly forty years to hundreds of thousands of readers.

In spite of his engrossing literary occupations at home, Mr. Robert Chambers managed to see a good deal of the world beyond the four seas. Being interested in geological subjects, and especially desirous to examine the action of glaciers, he visited Switzerland, Sweden, and Norway, Iceland, and the Faroe Islands, besides journeying through Canada and the United States. He published excellent popular accounts of his traveling experiences. The later period of Mr. Robert Chambers' literary career includes the following among other works: a "History of the British Empire," "History of Scotland," "Cyclopedia of English Literature," "Domestic Annals of Scotland," "Ancient Sea-Margins," a carefully-edited edition of Burns' works, and the "Book of Days,"—a work of the nature of "Hone's Every Day Book," but more searching and comprehensive. This book, which appeared in 1864, involved several years of constant and laborious research in the British Museum, and this perpetual task work, associated as it was with some domestic calamities, shattered the author's nervous system, and put an end to his literary labors. It was time to retire, for he had worked incessantly for upward of forty years, and had produced nearly a hundred volumes abounding in original thought. On his return to Scotland he took up his residence at St. Andrews, a place which, besides its social attractions, afforded scope for the popular game of golf, of which, for the sake of exercise, he was

an amateur. There Mr. Chambers died on the 17th of March, 1871. He was twice married, first to Miss Anne Kirkwood, of Edinburgh, a lady of most genial and sociable disposition. Her musical accomplishments constantly supplied him, after his daily labors, with the recreation most acceptable to so intense a lover of melody and song. He frequently accompanied her on the flute, of which he was exceedingly fond. After thirty-four years of happy union, she died in 1863, having borne him eleven children, nine of whom still survive. He afterward married a widow lady named Frith, who died about a year ago.

In social life Mr. Chambers was a universal favorite; hospitable in the best and highest sense of the word; full of kindness, and a shrewd and amusing master of conversation. The sympathy between himself and his children, and the delight which he took in his grandchildren (thirty of whom survive) was a most charming feature in his domestic life.

He possessed, as is evident in our portrait a marked physiognomy, a good intellect, with high moral sentiments. Language was large, and he was fluent. The perceptive faculties were large, and he was a good observer, and capable of describing accurately that which he learned.

WHAT IS WOMAN'S SPHERE?

AMID the extremes of the present day, who will step forth in the name of humanity and define woman's true sphere? Hitherto, she has been treated with so much intolerance that forbearance has appeared no longer a virtue; and desperation has goaded her on to extremes. Should she fail to see the happy medium, alas! for the comforts of domestic life. They who say woman's sphere is inferior to man's, understand not her true position. True, it lies in a different direction. As throughout nature, it requires the blending of the positive and negative elements to produce a grand harmony, so with human nature. The age in which we live is fraught with germs of development. Oh, that some master mind could attune the whole to harmony!

To place woman in man's position, or *vice versa*, detracts from the native dignity of both. Could not the arts and sciences be freely extended to her, thus rendering her a more suitable companion for man without drawing her forth from the sacred shrine of home to the halls of debate or the government of nations? Could man but understand that the develop-

ment of the world depends in a great degree upon woman, he would extend to her more freely all the advantages in his power to bestow.

Does not the mother impart to her offspring the leading characteristics of her own nature? Where does history point to a truly great man who was not the offspring of a noble mother? Nature appears to receive her impress more from the mother than from the father. Admit this, and you admit the voice of nature calling loudly for the extension of liberty and culture for her daughters, that the whole world may be benefited. We ask, *not* that woman may be placed foremost in the ranks of fame; we only ask that she may be placed foremost in the ranks of love and refinement. Nature has already defined that as her true sphere by her delicate organization. As flowers woo the sunlight, so the heart of woman yearns for the love and companionship of man. If she fails to obtain this boon, her bark has but a slender sail to spread before life's adverse gale. Man's robust nature is better fitted to cope with the stern realities of life; and what will nerve his

soul to action in the perplexity of business like a vision of home, graced with woman's love and tenderness? There he realizes his haven of rest, for pure love is heaven-born. Where can woman shine so brilliantly as in a home-circle, the loved companion of an intellectual man? The age is fast passing away when a fickle, frivolous, or painted, decorated doll will fill his soul. How can such women realize the intense happiness derived from self-sacrifice in a right course? Who does not realize that the responsibilities of a mother can only be faithfully discharged by her love? Let woman arise in the grace and beauty of womanhood, and try to define her true sphere, and the hearts of men, who can appreciate her, will respond to her call for right. It must be a work of time, since all are not upon the same plane of development; the most perfect legislation would fail to suit all conditions. The last century has produced great results. Will the next place woman in a position where chastity will be the crowning attribute of love?

EMILY E. TEASDALE.

FARM LIFE IN NORTH CAROLINA.

BY V. DU RANT COVINGTON.

THERE is no Southern State upon which a man may look back, as the place of his nativity and the home of his youth, with more pardonable pride and pleasure than to North Carolina; and this is calculated to foster and fix local attachments, not so much for its pleasant climate and picturesque scenery, but for the sterling home and neighborly qualities of its people.

One may travel the world over, share the oatmeal porridge of the Scotch Highlander under the shadow of Ben Nevis, or the Schabzieger cheese of the dwellers by Lake Lucerne, or the oatmeal cake and pickled herring of the Scandinavian, yet he will find no kinder, truer hearts, no friendlier folk, than the plain, unpretending people of old "Rip Van Winkle," whose simplicity of manner, dress, and conversation remind us of Diedrich Knickerbocker's "New Amsterdam," in the halcyon days of "Orloff the Dreamer." They are, without exception, hospitable, and one often gets a dainty meal of choice wheaten loaves, golden honey, savory chicken, and creamy milk where he would hardly look for

it: *i. e.*, in an humble log-hut, with a worm fence straggling round it, a pole with a parcel of martin-gourds surmounting it in front, flanked by a small corn-crib and hen-house.

The slavery of the negroes in North Carolina was of a very mild form. There was little buying and selling of that kind of property; they were not worked hard, and were, as a general thing, more intelligent than the negroes of South Carolina. The reason was that individuals owned fewer, and treated them more on an equal footing than was the case on the vast rice and Sea Island cotton plantations, where a thousand slaves sometimes belonged to one man.

The first year after their emancipation, in North Carolina the negroes mostly continued with their former owners, who agreed to give them a share of the crop. No marked disturbance occurred among them, and their general deportment toward the whites was characterized by respectful docility. Not only so, they worked well, and the crops that year were uncommonly good. We believe, had it not been for the advent of carpet-

baggers, political "*vultures*," that class so graphically sketched by Mr. Greeley, the new *regimé* would have gotten into prime working order in a comparatively brief time; but the good-natured and credulous negroes have been pliant tools in the hands of designing politicians, who have made it their business to stir up and keep alive prejudices between the former slaves and the land-owners. We believe in our hearts that their old masters still entertain in great part the kindly feeling which, in the days when that class of laborers was as dependent as little children, assumed often a patriarchal character. It would be a long step toward securing prosperity to the South if there could be confidence where now mutual distrust makes labor unreliable and capitalists disheartened.

The second year of freedom in North Carolina was rather disastrous. The negroes did not work so well, began to frequent political meetings, to spend their time in hunting, loafing round, and hanging about the villages. Crops that year were inferior, cotton fell in price, and bankruptcy became the order of the day; it was then that many large planters began contracting their operations, planting a smaller area, and working fewer hands. Those who did so succeeded much better than those who hired many freedmen, advancing supplies to them. The negro will always "take up" more than his share of the crop will pay for, if his employer will permit him; but in North Carolina the small farmers are prudent, and run things on a *home supply* basis; and labor is cheaper than further south or west, a stout negro who can split two hundred rails a day hiring readily at six dollars per month, and a negro woman who can cook for a family of half a dozen persons readily commanding four dollars a month.

The women of the Old North State, especially the farmers' wives and daughters, are a rather more independent class than their Southern sisters. The old-fashioned, homely arts of cooking, gardening, spinning, weaving, knitting, have never gone out of practice among them, and are carried to a considerable degree of perfection. They are unpretentious, kind-hearted, home-loving; the best of wives, daughters, and mothers in their tidy thrift, uniting Dutch cleanliness with Scotch industry and Swiss hospitality. Go

to see them, and they give you the heartiest of welcomes, the cosiest of white oak chairs, the most tempting of well-cooked dinners, prepared under their own eyes, often by their own hands. If you are sick, they nurse you patiently, tenderly, untiringly; they have balms, cordials, and tonics of their own making that will restore you to health and strength. In the long winter nights you can hear the old-time spinning-wheel buzzing till ten o'clock, or see the needles clicking in tireless fingers. Before bed-time you are treated to mellow apples, walnuts, and hickory nuts, dry and sweet. In the glowing firelight you look round the room, and see long strings of red pepper, bunches of hyssop and tansy hanging on the walls. There is the pile of lightwood knots in the corner, and you sit up late, while stories are told of the former days, when the happy owner of a bale of cotton hauled it a hundred miles to market, or trundled his hogshead of turpentine that distance for a buyer; when twenty pounds of sugar and coffee were a year's supply with only Sunday using.

[Of course the writer does not believe that the lawless desperadoes now ravaging some parts of North Carolina, witness the Lowery and other notorious gangs, are a legitimate expression of the real social status there.—ED.]

TOOLS FOR OUR WOMEN.

A YEAR or two since the writer had a circular stairway erected in her front hall by a professional stair-builder. The tool chest of that workman was to her a curiosity shop. What delicate gouges were there, what polished chisels, what fine-toothed saws, what fancy planes! Whenever that artisan had a nice piece of fitting to do, out of the recesses of that chest came just the tool for the occasion.

Now, a housekeeper operates in cloth, and meat, and flour as materials, just as a carpenter works in walnut, and pine, and white wood. She needs the most appropriate tools, and she cannot do good work without them. Why are not women as well supplied with implements for performing their various tasks as are workers in stone, and wood, and iron.

Before the American Institute Fair came to a close we went from end to end of that great building, with note-book and pencil, setting down every invention that promises relief to

women. Many of these are simple conveniences. For instance, there is a clothes-line holder that will fasten a line of any size, filled with clothes of any weight, in wind of any force, without knotting, tying, or untying. There is a sliding-gauge button-hole cutter instantly set to cut any size required. There are castors for sewing-machines which allow the machine to stand firmly when in use, yet permit it to move about when desired with the greatest ease. There is the automatic bobbin-winder for shuttle-machines, which will wind the bobbin with the uniformity of spool-cotton while one is sewing.

For invalids we noted two or three valuable conveniences. Foremost among these is the earth-closet. There is a folding-bed and settee combined, always ready for use. There is a stuffed chair with iron frame that can be put in a great variety of positions, with foot-rests and arms. A chair and step-ladder combined makes a valuable addition to our library and kitchen furniture. The mica lamp-chimney is a desideratum longed for by housekeepers; it does not

break by expansion or contraction from heat or cold, and is easily cleaned. The combination brush and mop-holder, by unscrewing a little clamp, may be converted into broom, mop, brush, scrubber, and pope's-head.

There is a mode of fastening window-shades without springs, pulley-brackets, or racks. There is a baby-jumper mothers will find convenient for young children, and combination toy-blocks invaluable for those of larger size. There is a lightning chopper that makes play of preparing mince-meat and sausages. There is a reversible griddle that cannot fail to produce batter cakes perfect in shape and defy the most awkward Bridget to make them ragged in turning. There are washers and wringers that reduce the labor of cleansing clothes one-half or two-thirds, according to the skill of the operator in using them.

Let husbands who love their wives remember them with a gift of some one of these conveniences, and, our word for it, very substantial blessings will be invoked for such practical uxoriousness.

Our Country and Its Resources.

That which makes a good Constitution must keep it, viz., men of wisdom and virtue; qualities that, because they descend not with worldly inheritance, must be carefully propagated by a virtuous education of youth.—*William Penn.*

PUNISHMENT AND PRISON REFORM.

BY REV. A. MCELROY WYLIE.

THIS subject is very properly demanding consideration among our active philanthropists; and, indeed, all classes of society have a profounder interest in the course pursued in the treatment of criminals than, at first sight, would appear.

Many moral and thinking minds have long been asking such questions as these: Why are so few criminals ever reformed—even among those who are, as yet, too young to have been hopelessly hardened? Why has the better sentiment of society been so long reaching this whole system of punishing the guilty? Why have not the principles of modern moral science been more generally applied to these tens of thousands of law-breakers? Why should society, in a free country like this, where pulpit, press, and platform are such powerful engines in the formation and direction of public opinion,

be so fearfully taxed by the expense attendant upon bringing criminals to justice, by their retention and treatment in prison, and by their worse behavior still, when they are turned loose again upon our orderly population? And why should not reform reach this entire prison system as well as other departments of our civil and social fabric?

We have no space, in a brief article, to indicate anything more than what we believe is the general cause for this objectionable state of things in our prison system. In this country, we are suffering from an epidemic of *politics*, obtruding into spheres where party issues should have as little to do as in pure mathematical science.*

Just here there has been a woeful perversion of the power of patronage. Our pris-

* See letter from a convict in the April number.

ons, like our custom-houses and almost all departments, have been too largely "run" in the interests of unprincipled men who have made a trade of politics—of men who were alike destitute of the education, experience, the humanity—not to mention religion—necessary to make competent prison officers. And even in cases where there was some degree of wisdom gained by experience the frequent changes of administration rendered it impossible to carry out needed reforms.

Prisons and prisoners have been used too much in the spirit of a slave-driving, heartless speculation, and with similar results, inevitably hardening the officials and indurating the hearts of prisoners by a course of unwise and unfeeling treatment.

Society at large, too, has not been without blame. Criminals have been summed up and herded together under one general indiscriminating sentence of condemnation, without regard to age or condition or degrees of temptation, in a style which has been at utter variance with a proper Christian sympathy or sentiment. This strange and hard way of looking at culprits may be traceable, in part, to a want of a proper view in society of the nature and ends of punishment. Too much of the old heathen conception of punishment still remains. Doubtless there is such a thing as punishment pure, but this belongs rather to the Divine government, and it may be made a question whether it is ever within the province of mere human government to inflict *evil* in the way of mere justice alone.

Society, just here, needs to be educated into correcter Christian views. Homer may represent the inferior gods dreading the wrath of Jupiter, because his anger was indiscriminating and revengeful, leading him to inflict evil upon the innocent and guilty alike. But this exercise of a blind rage or indiscriminating force should have no place in our better civilization.

On the part of parents, teachers, ministers, and writers, there should be clearer and juster conceptions, and a more careful inculcation of correcter views. We have been too much influenced to abhor the criminal instead of the crime; and we have been very slow in cultivating that mingled pity and sorrow for the offender, without which it is well-nigh

impossible to do him any moral or spiritual good. This is very far from being Christ-like, and it therefore can not end in any successful reformations. We are very far from sympathizing with that spurious sensibility which frames all-embracing excuses for the criminal, and confounds the exercise of charity with that dullness of conscience which can not restrain passion from a fellow-feeling with the culprit. But we would insist upon holding a clear conception of the due province of punishment.

In general, punishment should be inflicted for the purpose of maintaining law for the good of the governed, and to promote their improvement and welfare. Punishment, therefore, is not primarily inflicted in the interest of justice, which really becomes vindictive when its aim is only to impose loss and suffering upon the evil-doer himself.

In human government, the next principal design of punishment should be the improvement and reformation of the offender. And in the order of actual experience these are reversed, and the good of society is best secured by carrying out the latter design.

This truth is almost too obvious to need either proof or illustration. The divine element so permeates society that it is impossible for even the best advanced to forward all their interests in a platoon drill, while they seek to leave the baser members far in the rear. In this respect, society is like an army which is affected by every coward, every invalid, and every criminal in its ranks.

Classes who seek to ignore and leave behind the unfortunate, the destitute, and the sin-beset, are sure to be constantly thrown back upon their haunches with a most painful check. Every unfortunate and bad man has a bit in his good neighbor's mouth, whether that neighbor admits it or not. Let the good citizen, rejoicing in his better training, his better inheritance, his better character, associations, and prospects, now attempt to go forward upon his ambitious line of development, covering away from all sight his demoralized neighbor, and he shall find, somehow or other, he is under obligation to pull *his* share of the rear-of-society; and if his love of ease and selfishness seek to unhitch the traces, he will make the more painful discovery that he is under a divine

decree which now compels him to draw the load by the bit and the lines, which can not be thrown over either by trick or force.

We trow that the citizens of New York have, of late, experienced some bitter illustrations of this principle. They are finding out—perhaps they have both head and heart enough to heed the lesson—that to go forward they can not without a fair proportion of turning back to help those who are in the rear.

This law of mutually inwrought interest applies very forcibly to the relation of the virtuous and criminal classes. Society is affected through-and-through by reason of the culpable manner in which we treat our criminals. The law-breaker, from first to last, finds society pressing upon him with the harsh edges of hate, instead of feeling the force of leading-cords of love. For the most part he is educated, under the treatment the State deals out to him, to believe that government holds, exclusively, to the old conception of punishment, which was, that the law-breaker must make atonement for a past offence.

Now, is it not high time that criminals should be so treated that they shall see, and thoroughly be made to understand, that this conception of punishment is no longer held among Christian people; that, on the contrary, agreeably to our greatest law expounder (Blackstone), "The infliction of pain for the purpose of exacting a satisfaction for an offence committed is *vengeance*, and punishment inflicted for this purpose is *vindictive*:" that "the infliction of pain for a vindictive purpose is not consistent with justice and utility, or with the spirit of the Christian ethics; and that the proper end of punishment is not to avenge past, but to prevent future offences."

Let this be thoroughly trained into the conviction of the criminal, together with the other great object—that is, his own welfare and reformation—and one long step has been taken toward handing him back to society a blessing, and not a curse—a helper, and not a destroyer.

Well, this is precisely the point; and the question to be answered is, "How can criminals be educated into these convictions?" the reader may exclaim. This brings us face

to face with the great subject of "prison reform" and how it shall be effected.

That body of earnest, practical philanthropists who met in Cincinnati, October, 1870, laid down thirty-six postulates in respect to penitentiary and reformatory discipline, which every good citizen ought to study with a view to making an enlightened influence bear upon public opinion in regard to this important measure. After a thorough and very able discussion by representatives from all parts of the land, and we believe, too, some from other countries, their convictions were embodied in these thirty-six articles, which seem to leave no point bearing upon this reform untouched.

Modes of prevention, plans of treatment, fixings of responsibility, suggestions for the establishment of criminals as they return to society, and many other topics are most lucidly and ably presented. The fullest accord is given to the remedial power of religion: "Of all reformatory agencies, religion is first in importance, because most potent in its action upon the human heart and life."

The position is most admirably taken that the soul-forces must be re-established *within* the man and be made operative toward his restoration. "The prisoner's self-respect should be cultivated to the utmost, and every effort made to give back to him his manhood. There is no greater mistake in the whole compass of penal discipline than its studied imposition of degradation as a part of punishment. Such imposition destroys every better impulse and aspiration. It crushes the weak, irritates the strong, and indisposes all to submission and reform. It is trampling where we ought to raise, and is, therefore, as unchristian in principle as unwise in policy."

Chief and almost exclusive emphasis is laid upon "moral forces with as little admixture of physical force as possible," as the means by which to elevate and inspire the prisoner; and how even parents and teachers might well heed the following: "Brute force may make good prisoners; moral training alone will make good citizens. To the latter of these ends the living soul must be won; to the former, only the inert and obedient body."

We are not of that number who join the hound-cry against society as being responsible for all the wrongs which individuals do

or suffer; but we must confess to a large modicum of truth as contained in the following: "While this Congress would not shield the convicted criminal from the just responsibility of his misdeeds, it arraigns society itself as in no slight degree accountable for the invasion of its rights and the warfare upon its interest practiced by the criminal classes. Does society take all the steps which it easily might to change, or, at least, to improve the circumstances in our social state that lead to crime? or, when crime has been committed, to cure the proclivity to it generated by these circumstances? It can not be pretended. Let society, then, lay the case earnestly to its conscience and strive to mend in both particulars. Offenses, we are told by a high authority, must come; but a special woe is denounced against those through whom they come. Let us take heed that that woe fall not on our own head."

The most decided ground is taken against the passage of "peremptory sentences [which] ought to be replaced by those of intermediate length. Sentences limited only by satisfactory proof of reformation should be substituted for those measured by mere lapse of time."

Beyond a doubt, the introduction of this new feature into our criminal code would act as a most potent agency to induce prisoners to enter upon the establishment of better hab-

its. These wise heads and true hearts most effectually dispose of the objection against compulsory education on the ground of its infringing upon individual liberty and right: "It is our conviction that one of the most effective agencies in the repression of crime would be the enactment of laws by which the education of all the children of the State should be made obligatory. Better to *force education upon the people* [the italics are ours] *than to force them into prisons to suffer for crimes of which the neglect of education and consequent ignorance have been the occasion, if not the cause.*"

These, with the insisting upon the right selection of prison officials, whose offices shall be permanent during proper qualifications, are illustrative specimens of their wise postulates, and we earnestly commend this whole subject to the careful and conscientious consideration of our readers.

We might add a suggestion in favor of opening the prisons, not only to the services of faithful ministers, but to the efforts of lecturers who could interest the prisoners in understanding the physical, the social, the moral, the intellectual, and even the gastro-nomic laws of their own development and restoration. And we would nominate our friends, the publishers of the PHRENOLOGICAL JOURNAL, as the leaders in this wholesome aggression upon the haunts of restrained criminals.

HOMES OF FAMOUS AMERICANS.

BY LAURA C. HOLLOWAY.

THE HERMITAGE.

THE twilights are long in the South. From sunset to dark there comes a delicious interval when shadows form the background of every tree and shrub, and when the deep silence of nature is broken only by the chirp of the cricket or the wail of the partridge. On the hill-tops the sunlight fades slowly, but in the valleys it is lost ere afternoon is out. Rich tints kiss the summit of the forest monarchs long after the lowlands are wrapt in shade, and the glory of the western sky illumines the heavens even while the night shades gather and deepen under the mountain cliffs.

It was growing late, perhaps after eight o'clock, and yet light enough to trace clearly the sinuous course of the ancient highway over the

brow of the hill; but the night was really not far off. It was stealing imperceptibly on, and only lingered that the last glow-worm might be aroused in time to greet the gloaming. Busy little fire-bugs had been out some time, and even the orioles and mocking-birds, perched in their evening shelter, trilled out their mournful good-night. Occasionally a watch-dog barked as if impatient of the stillness; but beyond this no sound broke the quiet of the evening hour.

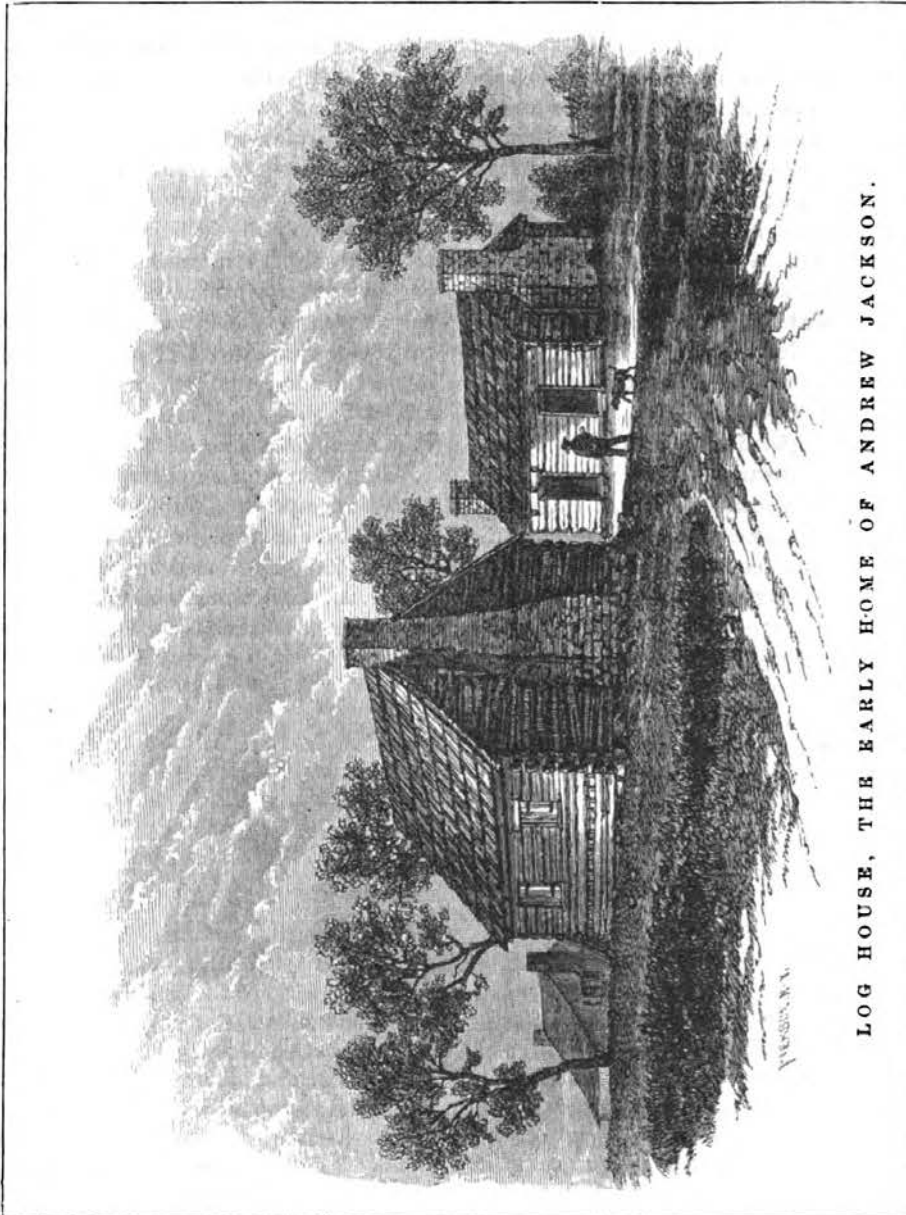
And the night-time is beautiful in the South. In summer the air is laden with the odor of the scented woods and flowering orchards, and in winter the crispness of the morning air is only beginning to be felt as the night comes on.

Just beyond the cotton-fields, which now are a waving mass of white bulbs and green leaves,

and across the old road is the grave of Andrew Jackson, and beside him, in death as in life, is Rachel, his wife. It is only a short walk, but were it miles away it would recompense us to see the young southern moon rise in the heavens and shed its light and beauty upon

step, and speak in gentle tones. That is the monument we see gleaming in the distance, and this gate here opens upon the long avenue of cedars, at the extreme end of which stands the old house.

The Hermitage is a shrine. In its deserted



LOG HOUSE, THE EARLY HOME OF ANDREW JACKSON.

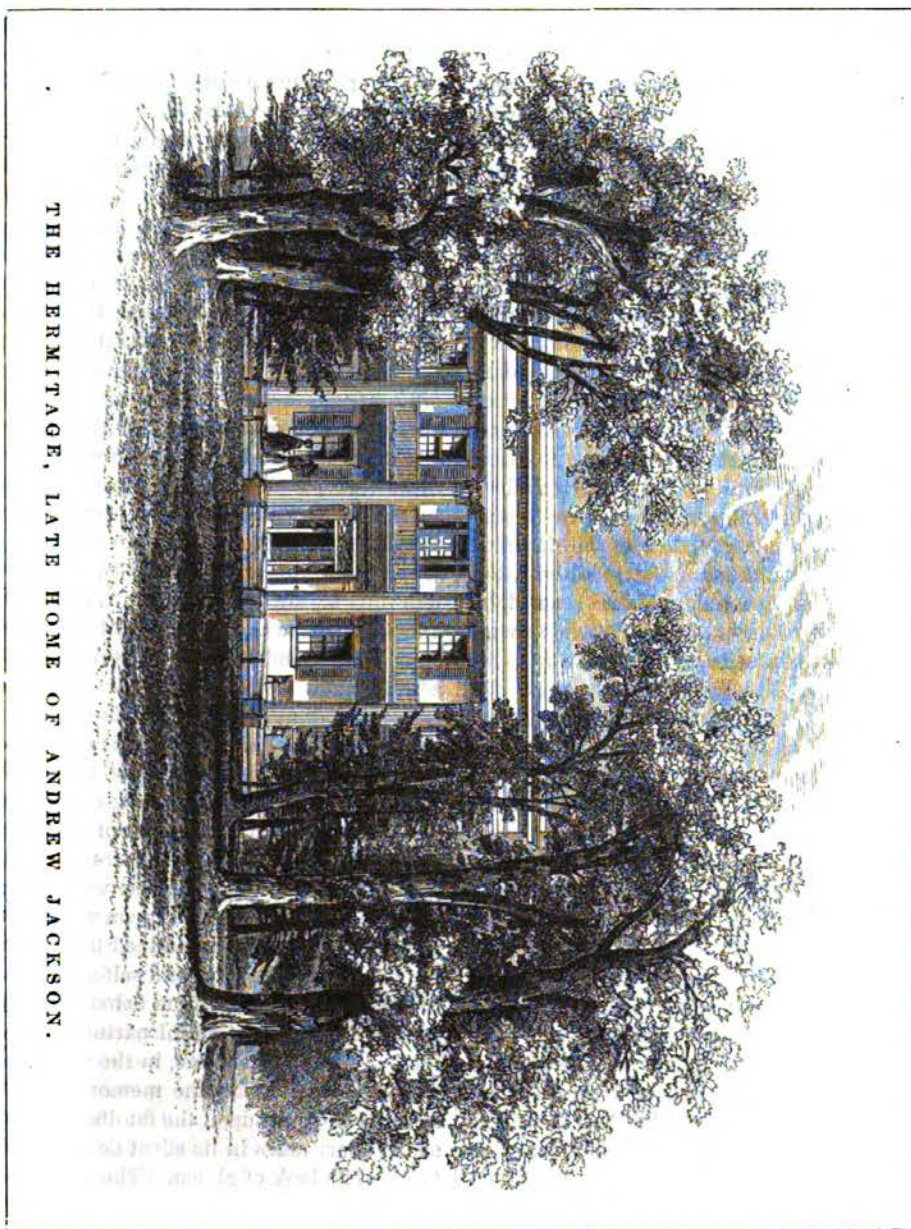
the resting-place of one who, by his greatness, has rendered the Hermitage no less famous in American history than has that other great name made of Mount Vernon a national shrine.

Is not all this hallowed ground? Even here, beyond its confines, we walk with quiet

halls, as in its grass-grown inclosure, the influence of its master and mistress still remains, and recollections of that long-gone time, when they were both there, haunt us as we step softly over the broad walk, or put aside the tall grass to make our way to their tomb. It is a place

of holy memories. All about the house and grounds are mementoes of those two who, as man and woman, husband and wife, lived their grand, beautiful, united lives there, and then passed from the sight of men to the presence of God.

prompts the thoughtful vi-itor to follow the windings of the river to that famous ford at the rear of the plantation, over which Aaron Burr once crossed to speak a word of truth, and say farewell before he went forth to tarnish the remaining luster of his already clouded name.



THE HERMITAGE, LATE HOME OF ANDREW JACKSON.

The old house stands silent now, but in its desolation it appeals with stirring force to the hearts of those who look upon it. The Hermitage offers but few inducements to the idle tourist or modern curiosity-seeker, but genuine sentiment, born of respect and affection,

And women ought to go there if for no other reason than for that which of itself is paramount—he loved and honored the sex. They owe him a debt of gratitude, and in no other way can they so profitably repay it as in a visit to this home of the past.

Everything concerning Jackson was great; but nothing so entirely so as in the early days of border-ruffianism, when, against the sneers of men who knew no virtue themselves, and could recognize none in others, his voice was lifted in behalf of woman, and his arm was always raised in her defense. His devotion to her was so exalted as to be beyond the conception of ordinary people, and he manifested this sentiment in the face of obloquy, sneers, and contumely. His memory is that of a noble, valorous man, whose delicacy and purity were so uncommon in his day as to render his character a problem and a mystery.

Tennessee and Kentucky were never more truly sister States in the institution of slavery than were they in the sport which distinguished them in the early day of their admission into the Union. Horse-racing was a passion with the people of this section, and for many years it was known as the turf region of America. The intensity of this racing spirit was sustained by the rivalry existing between the two States, and for months before a coming struggle betting would be the order of the day throughout the South. It was the pastime of the rich, and in the restless sea of human beings who crowded a course were seen the men who held the highest official positions in the land—men who were the peers of Jackson in all save his elevation above the love of sordid gain.

In Jackson's day the South rang with the clatter of hoofs; and the elegant sport, as it was termed, was encouraged and sustained by the wealthy slaveholders with a zeal commensurate with their condition of ease and want of occupation.

There was little in this sectional amusement to interest a studious, ambitious man; and there was nothing in its results to increase the appreciation of the weaker sex, who were in that day, in a measure, what the men chose to make them. Wholly dependent, and by reason of that dependence utterly unable to protect themselves, they gloried in a feebleness of mind necessary to render bearable their confined sphere, and wrestled not with a destiny as hopeless as it was outwardly brilliant. The ideal woman of the South fifty years ago was a queen; its real women were little more subservient than were the slaves who tilled the soil; and being so they were the playthings and toys of the conquerors, and expected only toleration for themselves, while they granted license to their husbands and brothers. The result was that outwardly they received the most chivalric devotion, while, so far as their

real interests were concerned, they were as much ignored and injured as any of their kind.

In such an age and at such a time Jackson came upon the scene; mingled with the best representatives of the Southern people, and set an example to them which they no doubt looked upon with some degree of admiration and might have imitated with advantage. But the penalty he paid for surpassing his contemporaries was to be laughed at by them; and the justice he has received from his biographers has not half vindicated his character from the aspersions cast upon it. None of them have rightly estimated his virtue or his morality; nor have they recognized the truth that the sharp angularities of his character were more the result of antagonistic surroundings and extreme sensitiveness than of any inherent disposition to do or to say wrong.

Those who would do him most justice can not quite rid themselves of the idea that he really was a man addicted to profanity and rough expressions, and that his infrequent use of oaths was due more to his power of restraint than to a genuine dislike of everything that savored of coarseness. The love of his mother was the guiding star of his life, and, until he knew his wife, was the one affection that directed and controlled his every public and private act. He had loved her living, and all his life hallowed her memory. And this rare appreciation of her must account for his absolute faith in the purity of women. Reared in obscurity—toiling early and late in a new country where the refinements and amenities of life were not known—possessed of no culture beyond that imbued in his own nature—he was yet distinguished from every other person with whom he was thrown; and he maintained through all his life the most unvarying and self-acting trust in the virtue of a sex to which belonged his sainted mother and the faithful partner of his later life. And standing here, in the very presence of the tomb, how fast the memories crowd the mind as it dwells upon the familiar Hermitage, as the heart takes in its silent desolateness and the soul its look of gloom. The house itself is in a level place, even lower than the old road in front of it, or the avenue leading to it; but the spot was selected by her, and it was built just as she directed. Its walls were once bright with scenes from Telemachus, and its parlors are yet decorated with faded dancing nymphs, half-defined groups of statues, and fairy fountains. Its altar places are still adorned with pictures and busts of distin-

guished men, though time and change have made sad ravages there.

The grand old house itself, the gift of love from the old hero to his wife, was once the most elegant mansion in the State. Tennessee boasts of no more beautiful scenery than is to be seen in the vicinity of its capital, and this famous place is situated south-east and at a distance of only twelve miles. Approaching it from the city the road leads past public buildings and handsome private grounds, and by Mount Olivet, the beautiful cemetery where sleep so many of Tennessee's best and bravest citizens. Sweet eglantine and wild cypress vines climb the old forest trees, and violets, fragrant and intensely blue, cover the knolls and adorn the banks of the numerous brooklets. Tall cedars rear their heads pinnacle-like, and wild ivy and love-vines tangle and interlace themselves in the boughs of the walnut and the oak. In the vicinity of the river the cotton grows tallest and the corn produces its richest tassels, and on either side of the highway are the white heads of the one and the green fruit of the other—sights pleasing to the eye cultivated to rightly appreciate nature and so to love it, as to be equally able to discern its trifles as to recognize its most glorious handiwork.

Across the yard and near the extreme southern end of it, glitters the large dome of the tomb. Shadows long and graceful fall upon the grass beyond, and rest lovingly upon the branches of the neighboring trees. The stillness is profound. Emotions dead for years rise in the heart and excite the brain; they will not be stilled; a part of the time and scene, and consecrated to the memory of the past, they call aloud for recognition even here in the very presence of the dead.

Over this graveled path Jackson has walked just as we are walking to-night; from this lofty-columned piazza and under the shadow of his own loved home, he too has enjoyed the perfect peace and harmony wrought out by the spell of night and silence. And years and years after he has been numbered with the dead, and neglect, and age, and the sad ravages of civil war have done their work of destruction, is come the chronicler to gather facts and paint for others the scene as it is. But so subtle is the power of the famous dead, and so impossible to overcome is the influence exerted upon the enthusiastic venerator of his greatness, that the scene must paint itself; the picture prove its own narrator.

The Hermitage as a place needs no description; its identity is written in the hearts of

men and women everywhere who revere the name of Jackson. And its history, as a home, is told in these few words—it was the altar of his love, the pride of his heart.

The old log cabin, which for so many years served as home for the happy pair, was at best but a rude affair, little suited to modern ideas of comfort, and entirely destitute of any claim to even the barest elements of it ordinarily found in a dwelling-place. But they took infinite delight in it, adorned it with the best they could afford at that time, and found under its roof the hallowed heart-peace the one had so needed and the other so longed to give. These two people, by the very power of that affection which united them, drew about them the purest men and women of their day, and wielded through it a degree of influence hardly ever equaled by any individuals in the private walks of life; and one of them lived most essentially in the retirement of the domestic circle, and knew no ambition beyond it. To her, home was the world, and the world was her husband. It is the pride and glory of the South that she has furnished so many brilliant and famous names to the history of the Republic of which she forms so essential a part. This is especially true of Tennessee, for she stands next to Virginia in her contributions to the governing power of the nation; and those who write under the stimulus of a full measure of pride for the honor and glory of the State and section which gave him fame in life and should give him reverence now, delight in the pleasant task of saying pleasant things of the great old man, and refrain not from denying, with that fervency born of feeling, and that confidence which comes of a correct knowledge of facts, the mass of imputations cast upon him while living and repeated now, when there are so few left to contradict them. There are some anecdotes told of Jackson which, by reason of their untruthfulness, have passed into history, and some sayings so little characteristic of the individual that they can be likened only unto inspired blasphemy.

Judge Hayward, of Ohio, who was the private secretary of President Jackson during his whole term of office, refutes the statement, very generally accepted, that he was in the habit of swearing, and before his death asserted that Jackson never used an oath while in the White House, and very rarely lost his temper.

"By the Eternal!" an expletive with which he has long been credited as having used in connection with the South Carolina Nullification Proclamation, was also authoritatively de-

nied many years ago, and that nothing could have been farther from the truth, is explicitly stated by this veteran, who knew him intimately and served him well.*

Major Lewis, of Tennessee, the life-long friend and neighbor of Jackson, should have written the real history of his associate, and thereby set at rest forever the patchwork stories which have done so much to prejudice the uninformed against him.

He was accused of every crime against law and decency, and believed by thousands of his countrymen to be the most infamous of men. They never changed their minds, and died in a belief early instilled. Yet even worse than their fate was his portion. To the end of his life he was assailed and reviled, and

passed into his grave the least understood of great men. Time will avenge him. The inexpressible wrong for which with him there was no forgiveness has been righted already, and the world now gladly acknowledges the unsullied, stainless reputation of his wife who was slandered, but never dishonored, and who was maligned, but never proven recreant to a single vow.

Eight years of fame and reward, of strife and warfare, were his portion as President, and eight years of rest and repose came to him after its close. Then the end was, and the shadows gathered about the homestead of Jackson, and the music about the hearth-stone ceased. The two who had immortalized it were dead, and the Hermitage was left as we see it now—a mere sepulcher of memory, a thing of the past.

IRRIGATION IN COLORADO.

WHEN individuals or families, on account of health inducements or climate, have decided to go to Colorado from any of the interior, Eastern, or Southern States, with a view to living in a community densely populated, and depending upon farming, horticulture, or fruit-growing for a livelihood, they are generally appalled at the necessity of irrigation. It meets them as they enter the borders of the promised land—it haunts them in their dreams—and follows their footsteps like a shadow wherever they go. It is at first unavoidable that a system but little understood should cause hesitation, anxiety, and even discouragement. And the effects of irrigation, when first seen or experienced on new land, have much to discourage the new-comer, however sanguine he may be of success. Then, again, many erroneous impressions of Colorado are produced by the American habit of exaggeration—the extravagant use of language such as marks peculiarly the style of mental literature. For instance, Colorado is called a “rainless country.” This is not true, while it *is* true that it has very few cloudy days, and an exceedingly dry atmosphere which rapidly absorbs the fourteen inches of annual water-fall, which is the average of this Territory. Compared with the interior States that average but

twenty-two inches of water-fall, and with parts of England having but twenty inches, this is not a “rainless country.”

The rain-fall of Colorado occurs principally in the spring months, giving thereby sufficient moisture to the ground to insure the sprouting and early growth of seeds without irrigation. Rain falls again in July and later, as snow during the fall and winter season. Two drouth periods are almost certain during the year: one embracing the month of June and perhaps part or all of the month of May; the other in the months of September, October, and November (at least after the equinoctial storm.) In this last season of drouth no irrigation is required; the earlier season only making it a necessity. The disadvantages to the farmer consist in the expense of building canals and the labor of applying the water. The cost of the former, when built by a colonial or other organized enterprise, will average not far from one hundred dollars for each forty acres; perhaps much more when undertaken for one piece of land alone. As to the labor and expense of applying the water, much depends upon the character of the ground; one man may, on old ground, well prepared and saturated by the irrigation of previous years, water during the dry season as high as five or six acres daily; while on newly-turned sod an acre may tax his best energies during the hours of daylight. The amount of irrigation required, or rather the number of waterings, depends upon the season and the altitude. At Denver, for instance, at an elevation of 5,300 feet, and at Greeley at 4,700, more waterings

* The original draft of the Nullification Proclamation, in the handwriting of Judge Hayward, by whom it was written, and containing the erasures and interlineations made by the President, is still in the possession of the family, and is in itself an eloquent refutation of the false charges so persistently made by the enemies of the old hero.

are required than at Colorado Springs at 6,000 feet; while on the Colorado Divide, between Denver and the Springs, at an elevation of 7,000 feet, crops are raised by rain-fall alone. Higher than 7,000 feet the rain-fall increases, but the wheat crop becomes so late as to be jeopardized by early frost; and at 8,000 feet, where irrigation is totally unnecessary, frosts which injure wheat are so certain as to make wheat-raising unprofitable. But on this elevation the grasses are luxuriant and abundant, while potatoes, peas, cabbage, beets, and most garden vegetables flourish, producing abundant crops with but little care.

As an offset to the expense and labor of irrigation, we have the power of producing at least twice the product per acre, and more for the labor expended, than can be produced in any country where the rains are excessive and consequently injurious. As proof of the former statement we would refer to the agricultural reports of the Territory, of crops averaging eighty-four and even ninety-seven bushels of wheat per acre. As proof of the latter, we would cite the individual case of Mr. B. H. Eaton, Commissioner of Weed County, who, in the summer of 1870, raised on eighty-four acres of land, with the labor of one man and the expenditure of \$285 only, in harvesting, threshing, etc., 3,000 bushels of small grain, 600 bushels of potatoes, and 200 bushels of onions.

Nor is this all. A farmer in Central Illinois may secure a fair crop and find it almost impossible to market it on account of muddy roads, being satisfied for months in the year if he can drag enough to the mill for food on a buckboard; while his Colorado brother draws his ton and a half at a load over the best road in the world, and to a high-priced market.

The location of the town of Colorado Springs and the lands of the Fountain Colony of Colorado are happily situated both as regards water and market for produce raised. The two irrigating canals now building, and which will be completed by the 1st of November, 1872, are: one from the the Fountain, supplied by Pike's Peak and the surrounding Snow Mountains, and the other from the Monument, heading in the mountains and the Colorado Divide, the former a never-failing stream, and the waters of the latter being held in large reservoirs which will yield an abundant and sure supply during the dry weeks of the growing season. By the Denver and Rio Grande Railway we reach the Denver market and the Pineries on the north; by a fair road the mines and the South Park country on the west, together with a cattle-growing region of a hundred miles or more on the east to supply an ever-increasing demand for the products of the garden, the field, and the farm.

R. A. CAMERON.

Department of Physiology—Our Sanitarium.

The truths of Physiology should be inculcated and enforced early and earnestly, and with the emphasis of high religious duty.—*Journal*.

SMALL-POX AND VACCINATION.

BY R. T. TRALL, M.D.

DURING the past winter the small-pox has prevailed epidemically in many American and some European cities. It has been more than ordinarily fatal, notwithstanding the numerous specific remedies that have been published in the newspapers, the various plans for "combating the disease" that have been recommended in the medical journals, and the extraordinary efforts which have been made to vaccinate the people by fair persuasion and foul compulsion.

In reviewing the literature, medical and non-professional, that has appeared within a few months, comparing the vaunted remedies with

the acknowledged mortality, and contrasting the preventive measures with the increased prevalence, one is forcibly reminded of that celebrated saying, that "There are innumerable remedies for all very mild and all very severe diseases." There is a logical basis for this proverb, and it applies to many diseases besides small-pox. Mild diseases are in some way recovered from under all kinds of treatment. Severe diseases are for some cause fatal under the same kinds of treatment. Some of the latest authorities in medicine say, that in the malignant form of small-pox no treatment is availing, while in the mild form no treatment

is necessary. These remarks apply, of course, to drug-treatment; and I am strongly inclined to the opinion that they could be applied, with equal pertinency, to many other diseases—possibly to the whole nosology.

The pathology and therapeutics of small-pox, whether we quote from the standard medical authors, the current medical journals, or the newspaper and magazine writers of the day, are as inextricably muddled as are the theories of "Psychic Force," the "Descent of Man," "Protoplasm," or "The Hollow Globe." Nothing is known of its nature except that it is contagious; nothing is explained in relation to its cause save that it is contagion. Its origin is a mystery except that one person takes it from another, leaving the first case to be solved when the "pre-Adamite man" is discovered; nothing is proposed as a preventive except vaccination, and nothing recommended in the way of medication except drug-poisoning. Wherever the malady prevails we hear nothing from boards of health except Jenner and vaccination. Offices are opened and physicians are appointed to insert the prophylactic virus into the blood of the people *volens volens*. But the instincts, or prejudices, or reason, as the case may be, of a large proportion of the people revolt against this plan of keeping out a possible virus by introducing a positive one; and in some places (in London, for example) societies have been organized to resist compulsory vaccination, on the ground that the remedy is worse than the disease. Alas, for the uncertainty of name and fame! Dr. Jenner is lauded by millions as one of the greatest philanthropists who ever lived. He is cursed by other millions as one of the chief destroyers of the human race.

THE NATURE OF SMALL-POX.

The only theory of small-pox propounded in medical books is to the effect that the matter of contagion, which is *sui generis*, works somewhat analogous to a ferment through the whole mass of blood, destroying or transforming some constituent of the vital fluid. Liebig, in his "Agricultural Chemistry," adopts this notion, and expresses it in the following language: "We know that the contact of the virus of small-pox causes such a change in the blood as gives rise to the reproduction of the poison from the constituents of that fluid. This transformation is not arrested until all the particles of the blood which are susceptible of the decomposition have undergone the metamorphosis."

Although this doctrine has never been controverted, nor even questioned so far as I know,

it is to my mind a self-evident absurdity. To transform any one constituent of the blood is to destroy the blood. Blood is composed of several ingredients in definite proportions and organic relations. Take one away, or metamorphose it, and there would be no blood left. It would be disorganized, destroyed. Yet the great chemist tells us that the small-pox virus transforms the constituents of the blood into virus, and the patient survives! And not only lives through the process, but has his very same blood left!

This chemico-pathological nonsense will not bear one moment's scientific examination. Medical men and chemists might as well talk of abstracting, transforming, metamorphosing, or destroying the proximate elements of the solid structures, and have the structures still intact, or one of the constituents of a salt, acid, or alkali, and have the whole substance left, as to tell us that blood can be transformed, and still remain as blood. Let them try the experiment with any substance they can think of, organic or inorganic, and they will prove the fallacy of their assumption if they do not see it.

Let them abstract, transform, or change in any manner the nitrogen of albumen, the oxygen of fibrin, the carbon of casein, the hydrogen of starch, and see what they have left. They will not have the first particle of either one of the above substances. They may test the principle on an apple, a potato, a grain of wheat, a nerve, a muscle, or a bone. Abstract or change the casein in the apple, the starch in the potato, the gluten in the wheat, the albumen in the nerve, the fibrin in the muscle, and the lime in the bone, and every one of them will be irretrievably disorganized and destroyed. So, too, of inorganic materials. Take away or change the oxygen in water, the nitrogen in air, the carbon in illuminating gas, the hydrogen in coal, the sulphur in glauber salts, the chlorine in table salt, the potassium in nitre, etc., and each of these things will cease to exist. The idea of transforming a constituent element of a substance, and having the substance, is as preposterous as the notion of eating one's dinner and having it!

It seems to me a strange scientific hallucination that should single out the blood from all other things under the sun, as the only one capable of undergoing a metamorphosis without being metamorphosed at all.

The mistake is a part of the confusion that prevails in all our systems, simply because the authors of our text-books do not distinguish

between chemical changes, physiological processes, and morbid actions. Everywhere they are confounded, as causes of disease are everywhere confounded with the disease itself. In relation to small-pox, the doctors have mistaken effete matters and impurities existing in the blood for constituents of the blood—an important distinction with a very great difference. The transformation occurs with this extraneous matter *in* the blood, and not with the constituents *of* the blood. Small-pox is, therefore, a remedial or purifying process; and no one whose blood is absolutely pure can by any possibility have the disease, nor any other contagious malady.

CAUSES OF SMALL-POX.

All organic poisons are nitrogenous. Whether contagious, infectious, venoms, or viruses, they all exist in the form of globules or corpuscles. When received into the blood-vessels they are carried along the course of the circulation with whatever else may exist in the mass of blood. The disturbance they occasion in being transported through the channels of circulation to the outlets of the body depends on their size and quantity in part, and in part on the kind and amount of effete matters and impurities in the blood. In contact with the *living* corpuscles of the blood they occasion vital resistance, precisely as alcohol does in a *living* stomach.

Now, mark! The small-pox virus does not act on the blood, nor on any one of its constituents. It does not act at all. It is the living system which acts. Alcohol does not act on the stomach nor brain. They act on it. Let the physician inoculate a corpse, and see if it will "take." Let him administer a dose of brandy to a dead person, and see if it will make him drunk. The fundamental error of all our pathologists consists in placing the action on the wrong side.

The presence of the small-pox virus in the blood occasions vital resistance on the part of the *living blood* corpuscles, just as an emetic in the stomach occasions vital resistance on the part of that organ, and as snuff in the nose excites resistance there. The stomach endeavors to expel the *medicine* by vomiting, and the nostrils try to eject the narcotic dust by sneezing. Neither the emetic drug nor the tobacco poison *does* anything. Both are done unto. It is precisely so with the small-pox poison. It would remain as quietly and *actionless* in the blood-vessels as the tartar emetic would in the apothecaries' gallipot, if the living system would let it; but it won't. Self-preservation being a first vital law, the living fluids and

solids all co-operate in a *remedial effort* to expel the virus; and they will succeed, or die in the attempt.

The circulating system endeavors to get the small-pox virus out of the system through the mucous membrane and skin. And the violence of the fever and the degree of eruption will correspond exactly with the difficulty in expelling it; and the difficulty is measured precisely by the quantity of virus and amount of impurity in the blood—modified, of course, by the favorable or unfavorable circumstances in which the patient is placed at the time. If the blood be nearly pure the small-pox corpuscles can mingle with the blood corpuscles, be carried along with them, and finally expelled from the system with comparatively little disturbance; that is to say, with slight fever and little pustulation. The patient will suffer little, and there will be no trace of scarring or pitting. But if the patient's blood be foul, fouler, or foulest, the difficulty will be great, greater, or greatest. To this rule there is no exception, and this fact alone gives the rationale of the cause and nature of small-pox, as well as suggests the proper treatment.

If the blood be very bilious or viscid—if it be gross with the elements of bile, or putrescent with rotting or decomposing effete matters of any kind, the virus will have so much the more material to transform or metamorphose, and the fever and eruption will be correspondingly severe and dangerous; and if, in addition to retained effete matters (resulting mainly from torpid liver and constipated bowels), the blood be loaded with saline, alkaline, or earthy impurities, the remedial struggle will be still more difficult, and the consequences still more dangerous. In this case there is more or less "wear and tear" (though not transformation) in the corpuscles and other constituents of the blood. Indeed, there is wear and tear and waste and destruction throughout the whole domain of organic life, as there always is in all violent struggles with an enemy. In extreme cases the blood may be so disorganized, as it is in some cases of putrid typhus fevers, as to render death inevitable.

Herein is the rationale of the two forms of small-pox, the mild and the malignant. There are many degrees of either form, depending entirely on the different conditions of the blood, all pointing to quantity of virus and degree of grossness for an explanation; and this view of the case is confirmed by all the facts, history, and phenomena of the disease in all ages and countries.

A person whose blood is nearly pure must be exposed to and receive a large amount of contagious matter before he will manifest any febrile paroxysm. Small quantities will pass through his lungs, blood-vessels, and excreting organs without any appreciable disturbance; and when the virus has so accumulated, because of prolonged exposure, as to necessitate the febrile paroxysm, unless the patient's habits are extremely unhygienic, he will have the eruption in the distinct or mild form. The fever will be of the diathesis termed high, inflammatory, or entonic, while the eruptive inflammation of the skin will be of the kind termed phlegmonous—analogueous to ordinary boils or abscesses.

With a very gross person a very little virus may occasion a severe fever and a destructive pustulation. But if the blood be very gross and the quantity of virus great, the patient will have the very worst form—the “black small-pox.” The fever will be low, typhoid, or atonic, and the eruption dark and confluent; the pustules will run together, and the inflammation of the skin be of the erysipelatous character, corroding the structure, and, if the patient survives, leaving deep pits and indelible scars on the face.

All contagious diseases are caused by accumulated animal excrementitious matters. Whether they take the form that will occasion small-pox, measles, scarlatina, erysipelas, miliary fever, plague, whooping-cough, mumps, or chicken-pox, depends on the local influences which modify their retrograde transformations. If our otherwise enlightened people would adopt the Mosaic code as relates to personal cleanliness in the mere matter of the excretions, all contagious diseases would immediately disappear. If the mere matters of sewage and ventilation were properly attended to in cities, there would be no small-pox to trouble the boards of health to enforce vaccination. And if country people would manage their cess-pools, privies, barn-yards, stables, henneries, and hoggeries according to the principles explained in the Levitical Code (see Bible), none of the loathsome contagious maladies now so prevalent would afflict them. Who does not know that camps, hospitals, and tenement-houses are perpetual sources of pestilence? The reason is, accumulated excrement, and nothing else.

PREVENTION OF SMALL-POX.

Cleanliness is all-sufficient. But, unfortunately, cleanliness seems to be among the “lost arts.” The people do not seem to understand it, plainly as it is taught in the Good

Book; and boards of health, since vaccination came in fashion, seem entirely to have forgotten Moses and the prophets.

Perfect cleanliness is a sure preventive of all contagious diseases. But how is one, who is ever so well-disposed and sufficiently intelligent, to keep himself clean-proof against contagion, when others are continually befouling the very atmosphere he is obliged to breathe? He can do it only imperfectly, but perhaps what he can do may save his life. In all large cities there are obstructed sewers, unwashed gutters, underground apartments, narrow streets, and sunless alleys, from whence emanate constant streams of contagion. All must inhale the air, and all must be infected more or less. Whether they will have contagious diseases, and, if so, how severe they will be, depends on the circumstances already explained. Of course, all personal habits which conduce to pure blood and good health are preventive, while riotous living, dissipation, and impurities in food or drink are conducive to all contagious diseases.

It is not always easy to find a breath of pure air in the country unless one keeps at a prudent distance from all human habitations. Many a wealthy farmer has an elegant mansion-house, a fine garden, beautiful grounds, and pleasant surroundings—all the essentials of an earthly “Paradise Regained”—yet within smelling distance are sources of pestilence enough to give the whole family small-pox, measles, typhus, or diptheria, should the prevailing breeze be continuously for several days toward the parlors and sleeping rooms. Some farmers keep their domestic animals on heaps of excrement, and wonder why their horses have the glanders, their cattle the rinderpest, their sheep the staggers, their hogs the cholera, and their fowls the gapes. All are caused by the corpuscles of retrograde metamorphosis, and the fungi and insects which such materials engender. In thousands of New York tenement-houses, and in the pestilent rookeries of “East End” in London, the miserable wretches of human beings live in a manner practically analogueous to the lives of many of our domestic animals in the country. Their wealthy neighbors a few squares distant may congratulate themselves upon their immunity. But the wind is no respecter of person. The subtle poison which eludes microscopical investigation and chemical analysis finds them, and they marvel at that mysterious Providence that permitted such a disease to “attack” them in such a place!

VACCINATION.

If a drug poison be a remedy for a morbid action; if the true healing art consist in "curing one disease by producing another," and if it be proper to poison a person because he is sick, it follows logically that the vaccine virus may be employed either as a preventive of or a remedy for small-pox. These questions, however, are not in order here, but will probably be discussed in full in the *New Health Monthly*, soon to make its advent. But as the question of vaccination is among the most vexed, and most complicated, and most misunderstood problems of medical science, I will try to relieve the subject of its principal obscurities.

I do not believe that vaccination is justly chargeable with all the scrofula, and consumption, bad humors, and vital deterioration that some authors have alleged against it. There are many and abundant causes of these ailments extant were no small-pox or vaccinia in existence. Nevertheless the principle of vaccination is wrong. It is not right, as a rule, in either the vital or the moral domain, to try to cast out devils through the instrumentality of devils. Normal agencies are the remedies for morbid conditions, as much as righteousness is the remedy for sin. Evil is to be overcome with good, and diseases are to be remedied by removing their causes, not by combating their symptoms. It seems to me as irrational to try to cure or prevent diseases by administering the causes of diseases, as it would be to try to reform a person of the habit of telling lies on a particular subject by teaching him to tell lies generally on all subjects. He might be "cured" of the special vice, but would he not be all the worse for the curing?

If a person is sick because of poisons or impurities in his system, why should another lot of poisons and impurities be put into his system? Common sense teaches that the better way is to supply the conditions which will enable the body to purify itself. I do not forget that medical authors teach that poisons antidote the disease, or its causes, or supply some deficient element, or neutralize morbid matters in the system; nor do I forget that there is neither truth nor common sense in such teachings.

I admit that vaccination may sometimes be the least of two evils. If persons are constantly exposed to the virus of small-pox, and will not or can not pay any attention to health conditions or hygienic rules, it may be better for them to be vaccinated, not that vaccinia is *per*

se any better than variola, but because nearly all persons, when vaccinated, do for a few days, in anticipation of the disease, attend more carefully to those well known circumstances which aggravate or mitigate all acute diseases. Persons are usually vaccinated in the best conditions, when both body and mind are quiet and rested; but they generally get the small-pox virus in their worst conditions, which conditions are commonly maintained up to the moment of the "attack" of the disease. The rule, therefore, for preferring or declining vaccination is a very plain one, depending entirely on what the patient's habits will be.

Authors disagree as to the fact whether scrofulous, syphilitic, and other taints and humors may be introduced into the system along with the vaccine or small-pox virus. Some authors affirm that there is no such case on record. This may be true, for it is the next thing to an impossibility to record such a case with demonstrable evidence. Cases have occurred, and I have seen several, in which a general cachexy succeeded the vaccine disease, ending, in months or years, in the death of the patient—cases in which no evidence of cachexy existed prior to the introduction of the poison. These cachexies have been manifested in the forms of glandular indurations and ulcerations, fever sores, scurvy, and malignant pustules. It is true that mercurialization will produce all of these conditions; and if we have a combination of mercurial disease, syphilis, scrofula, and small-pox virus, it would puzzle a Japanese juggler to "diagnose" the symptoms pertaining to each. Nor would the distinction be of the least practical utility if we could make it. The medication would in all cases be the same—purification.

That small-pox or vaccinia induced by inoculation does secure immunity from small-pox the natural way, no intelligent physician will dispute. No matter how the virus gets into the blood, its passage through will transform and thus destroy certain effete matters, while the process of carrying it through the blood-vessels and casting it out will eliminate some of the existing poisons and impurities; and the patient will not again be susceptible to the *same* disease until the *same* effete matters have again accumulated. This explains why some persons have small-pox two, three, or more times the natural way, while others have it only once though equally exposed, and others never have it at all. It explains also why some have the varioloid, after vaccination, more severely than others have small-pox the natural way.

It explains, too, how it is that in London, New York, Philadelphia, and other large cities (where the material to generate the virus is abundant), despite the constant operation of the vaccinating dispensaries, the bulletins of the boards of health, the opinions of medical men, the specifics in the newspapers, the praises of Jenner and vaccination, the isolation of the pest-stricken patients, and the fumigation of infected tenements, the disease pursues its onward march, and the hearses run swiftly to and from the cemeteries, just as though nothing unusual had happened.

My own theory and practice in relation to small-pox is, and has been for twenty-five years, to live as hygienically as circumstances admit, eschew vaccination, and then if the disease "attacks," trust to Providence and hygienic medication.

TREATMENT OF SMALL-POX.

The disease being a process of purification, it is the business of the physician to favor that process by all available means which are not themselves injurious. The ancient physicians who had the first cases ever known to treat, conceived the correct theory of the disease. But they made a terrible blunder in practice. They noticed that the system was endeavoring to expel the poison through the cutaneous emunctory, and to aid and assist nature they put the patients into warm rooms, overloaded them with bedding, and give them warm drinks and sweating medicines. The practice was very fatal. Physicians then went to the opposite extreme, and nearly froze their patients. This plan was less injurious than the other, but not the right one. Physicians in those days had as mistaken notions as to what constituted the purifying process as the modern physicians have. The physiological condition essential to successful purification seems to have been wholly overlooked by physicians in all ages. Fortunately, we have an infallible guide in managing the hygienic treatment, applicable to all cases and stages. *It is to balance the circulation.*

If the circulation is kept very nearly balanced through the whole course of the disease, the virus will all be expelled without serious damage to the blood or the structures, the patient will recover without spot or blemish, and there will be no *sequela* or secondary diseases to trouble him.

Physicians never seem to understand—and the principle is nowhere taught in the textbooks of our medical colleges—that, in order for depuration to be performed in any organ,

the capillary vessels must be maintained at nearly the normal diameter. When greatly congested or very deficient in blood, excretion ceases. In the height of the hot stage of fever, the capillary vessels are so overloaded with blood that depuration is entirely arrested. Here cold ablutions will promote it. In the cold stage of fever the blood-vessels of the surface are so contracted (the blood being congested internally) that depuration is arrested. In this case warm ablutions will restore it. This rule applies to all fevers; and it is because it is not understood that physicians are forever dosing their patients with antiphlogistic drugs in the hot stage of fever, and with stimulants in the cold stage. Neither promote depuration, though both combat the symptoms and the vitality.

The temperature of the external surface of the body always indicates what should be done. If preternaturally hot, cool it; if preternaturally cold, warm it. Hence water of any required temperature may be used, and with all the freedom necessary to produce the desired effect. The same rule applies to taking water internally as drink, the thirst being the unerring guide.

On account of the lodgment of more or less of the virus in the glands of the skin, and its removal by the process of suppuration (precisely as tubercles are removed from the lungs, or a sliver from the finger), constituting the "pustular exanthem," it is of importance in all cases to have the patient in as cool a room or place as he can bear without chilliness. There is no objection to fire in the room, but thorough ventilation is indispensable. No patient should be kept in a room that has not windows or doors on two sides, that a current of fresh air may at all times be present. Whether the face will pit or not, and whether much or little virus will accumulate to infect others, depends very much on this matter of ventilation. If all the small-pox patients in cities and country places were placed on the upper floor of the dwelling, the windows and doors thrown open enough to keep the air rapidly changing, and the patient managed in all respects hygienically, there would be few or no deaths; there would be no need of lazarettos or small-pox hospitals; nor would there be the least danger of the disease spreading. I have treated many cases in New York and other places in this manner (of course, unknown to the authorities), and no one of them has died, no one has had any permanent pox-marks, and no one has ever, to my knowledge, had the disease because of exposure to them or the building. Hence I know whereof I affirm.

As the eruption is about to make its appearance, and sometimes for one or two days preceding, the patient is apt to be more or less delirious, and to suffer much of determination of blood to the head. In this case the head must be kept constantly covered with cold wet cloths, very frequently renewed. The eyes are apt to be tender to light, in which case they should be shaded, not by a window curtain, which interrupts the circulation of air, but by a shade over the head. An umbrella placed over the patient's head will answer every purpose, as it will darken the light without obstructing the air.

To prevent pitting nothing is necessary but to keep the face covered (after the morbid heat is abated) with dry flour. The skin must be dry when it is applied, or it will aggravate the heat and pain. It may be applied to the whole face, and prepared so as to make a complete coating, and then, with fine cloth or tissue paper, removed from over the eyes and mouth, so that the patient can see and speak if he wishes to. The object of *flouring* the face is to keep light and air from contact with the abraded surfaces or pustules, without preventing depuration through the skin. This dry flour will accomplish, while greasy, oily, or pasty applications would fail. If they kept out the air and light they would keep in the virus and perspirable matter.

REGIMEN.

The patient may drink all that the thirst calls for; but if very thirsty it is better to take small draughts and repeat them frequently. Fruit juices, as oranges, berries, apple-tea, etc., are not objectionable. No solid food should be taken, nor but little of any food, until the pustules are developed and the febrile heat permanently allayed. Until then a little thin gruel once or twice a day, a baked apple, stewed tomato, or its equivalent, is all that can be taken with advantage in the matter of nourishment. Tea, coffee, milk, sugar, salt, vinegar, and all spices should be prohibited. Nor should any kind of animal food, not even beef-tea or chicken-broth, be allowed. When convalescence is established, the ordinary diet may be gradually resumed.

CONFIRMATORY STATISTICS.

Many physicians have treated their small-pox patients without giving them any medicine, depending wholly on nursing and regimen, and no one of them ever complained that his patients suffered because of the absence of the drugs.

Several years ago Dr. Snow, health officer of Providence, R. I., treated all the cases of an

endemic, some of which were severe or malignant cases, without giving a particle of medicine, and without losing a single patient. The facts were published in the Boston "Medical and Surgical Journal;" but I have not heard of any other physician adopting the no-drug practice.

About a dozen years ago the small-pox was very prevalent in some parts of New Jersey. Dr. John Grimes, of Boonton, treated a large number of patients without medicine, and lost none. Being a vegetarian himself, he induced many persons to adopt the vegetarian diet as a preventive of or preparation for the small-pox. Very few of these had the disease at all, and those who did, had it in its mildest form.

I have known persons who lived on a plain and simple diet, and drank nothing but water, have the disease so mildly that it required the closest examination to determine that the pustules were really variolous. They were not confined to the bed for a single day.

Six years ago the small-pox was very prevalent in New York. About a dozen of the students of the Hygieio-Therapeutic College had the disease. None of them died; and none, with one exception, took any medicine. One of them went to the hospital, and returned four weeks afterward badly pitted. The only medicine he took was a little whisky-punch, and that on compulsion; but it was enough to spoil a good-looking face. Two of the graduates of the preceding term of the College had the disease, and through the influence of friends more zealous than wise, fell into the hands of the "family physician." They both took medicine and both died.

But why pursue these dry details? If the reader understands the theory I have advanced, he will not need them. If he does not, ten thousand times ten thousand such testimonies would be of no benefit to him.

LIFE IN PRISON.

THE Portsmouth *Times* of a recent date contained the following concerning an historic character at the penitentiary:

"John Gull, of Stark County, was sentenced to the penitentiary for life, October 31, 1836, his crime being murder in the second degree. He is now 72 years of age, nearly half of which has been spent in the penitentiary. In accord with other papers in the State, we are in favor of his release. His age would probably be sufficient guarantee for his good con-

duct during the brief remnant of his natural life. He would not recognize the world he left thirty-five years ago."

Probably without a full acquaintance with the circumstances of the case, the *Times* makes a recommendation suggested by mistaken humanitarianism. It would be absolute cruelty to discharge John Gull from the prison, even if the terms of his sentence had been fulfilled. He is one of the established characters of the institution, and probably wouldn't vamoose if tendered liberty; indeed, his confinement is merely nominal, his mental faculties being so impaired that he can not appreciate discipline, and his physical disabilities being such that he is not valuable in the workshops. His lunacy is not of the kind requiring restraint, and he is permitted to wander around the yard at will, apparently happy in imaginary wealth and dominion. It required a walk of several minutes through the yard, in company with one of the prison officers, yesterday morning, before we found the venerable prisoner, leaning on his cane and complacently viewing the busy scenes in the workshops, all of which he believes he owns. In his estimation the riches of Croesus are but as a drop in the bucket to the enormity of his possessions and pecuniary transactions; he could easily pay the national debt without drawing on his banker, and could settle the vexed question of revenue in a twinkling. He has long since superseded the State of Ohio in the proprietorship of the prison-ground, and does an outside banking business which he counts in hundreds of tons of dollars. The most singular part of his hallucination is his belief that he prosecutes his immense transactions outside the walls at night. Nearly every morning he has stories to tell of the fabulous quantities of money gained the night before through his own enterprise, or that of his numerous agents. When asked yesterday morning if he had been out Monday night, he replied that he had not, but had sent some of his men; he himself had been below (pointing to the ground); the profits of the night's operations he did not regard as amounting to much—only a few tons of silver and a cart load or two of gold had been collected. In consequence of this meager business Gull was in a bad humor, and not disposed to converse freely, restlessly

moving about and exhibiting a desire to move to some other part of the yard to superintend some of his manifold business operations.

This singular man has been in this demented condition for more than ten years; although too feeble to work, he looks as though he might survive ten years more. If turned out upon the world he would be completely lost. In his own imagination he has the most unbounded liberty, and possesses what the world mainly strives for, wealth without limit. He would regard the freedom that the Governor could bestow with the most lively contempt.

[And is this the object of such imprisonment? Would it not be better to place this lunatic in an asylum? Are not all his belligerent or murderous propensities thoroughly subdued? Is it any part of the State's intent to drive their prisoners into imbecility and idiotcy? Should not such measures be adopted as will tend to call out the higher and better traits of character? May not convicts be so educated, trained, and disciplined as to come out of prison better than when they went in? or, "being predisposed to evil as the sparks fly upward," is it useless to attempt to reform and improve them?]

♦ ♦ ♦ "LET HIM THAT STANDETH TAKE HEED LEST HE FALL."

For, friend, the heights are slippery. He who held,
A sun ago, the nation's sacred trust
May lie to-day a strong oak newly felled,
With all his glory trailing in the dust!
Named yesterday a leader brave and just,
Faithful to execute, as wise to plan—
To-morrow stigmatized as one whose lust
For wealth and power his patriot's zeal outran—
Hailed as a god, and spurned as less than man!

Fickle is worldly favor at the best,
And he who sails upon its shining tide
May look to be contemned where once caressed;
To be debased where he was deified!
More happy they whom Fortune hath denied
To walk the dizzy heights of earthly fame;
Secure from all the lures of pomp and pride,
They go their ways, free from reproach and blame,
With peace the worldly great can never claim.

Time is Truth's oracle. The hour will come
When all this dimness shall be turned to light,
And false accusers shall be stricken dumb,
And Wrong shall flee before the wrath of Right;
And he who hath a conscience clean and white,
For man's approval can afford to wait;
But woe unto the guilty! for no night
Is black enough to hide him from the fate
That bringeth all to justice soon or late!

ANNIE L. MUZZEY.



NEW YORK,
MAY, 1872.

CRYING DOWN THE RACE.

SICK, jaundiced, dyspeptic, and disappointed men—men without hope, and with no sunshine in their cold natures—men who believe that “whatever is wrong”—are habitual croakers, and are continually “crying down the race.” Their theology is of the bluest sort, and the God they recognize delights in “punishing the wicked.” The doctrine of total depravity accords perfectly with their views, and they have some doubts about man having been created “in the image of God;” at any rate, that the natural man is only bad, bad, bad—simply a miserable sinner at best, utterly unworthy a blessing, and if exact justice were done him, he would at once be cast into a place of fire and brimstone, which burneth forever and ever! This is one phase of a doctrine taught in this enlightened country, and is cherished by the class indicated. Has not this sort of teaching a natural tendency to make men worse, rather than better? Will it make men good and win souls to God? or will it make them bad, and drive them from God? It is very true that the modern man is far from perfect. Why? Is the modern woman of fashion the angelic creature God intended her to be? Will it make her any better to go through the mechanical forms and ceremonies of fashionable worship? Calling her a frivolous flirt, a puffed, padded,

wriggling fraud, will not reform her, nor give her higher ideas or aspirations! Twitting her of willful barrenness will not make her fruitful! She must be educated to something higher, something nobler than the fashionable arts of deception. She has, with all her faults, redeeming traits, and so has man. Let her once realize the true value of a high and holy human life—the importance of the passing time in which she may grow into the fullest stature of real womanhood—make her to appreciate that life is an earnest, given us for a high and holy purpose—and she will cease frittering it away; she will become something more than a toy, a showcase, or a fashionable fool and flirt.

So, too, of weak, young men. They look to their seniors for example. Seeing a smoking President, they, too, must smoke. Is it not a manly act? And thenceforward all through life they will stink of tobacco. This may not necessarily induce liquor-drinking, though it usually precedes it, prepares the way for it, and ends in anything but sweetness of breath, purity of blood, healthfulness of body, serenity of mind, spirituality, or godliness. Now, there is no necessity for any of these self-indulgences, these letting down the moral bars, and yielding to the temptations of perverted appetite and passion. These young men must be taught that even Presidents are unsafe guides either in politics or personal habits. We have had the national disgrace of a drunken President, as Europe has had dissipated and imbecile kings, idiotic and drunken lords; we are, just now, unfortunate in having a tobacco-smoking President, which, as a national example, is only bad. But because there are idiots, lunatics, imbeciles, and brutal beasts in human form—creatures so thoroughly perverted that there is not a sound thought in their minds, nor a drop of healthy

blood in their veins—creatures whose very touch is pollution and poison—still the race, as a whole, is rising; civilization is advancing, and it is a false philosophy, a false theology, and a falsehood, to “cry down the race.”

Let us thank God for the hope before

us, the good there is in us, and, instead of magnifying short-comings, difficulties, dangers, and imperfections, let us rejoice that we are no worse, and make the most of ourselves. If we do the best we can, we shall be acceptable to Him who judges in justice and in mercy.

OLD BOYS.

THERE are great, strapping, awkward men, who stand six feet in their stockings, and yet in character are only boys. Indeed, there are middle-aged men who have not yet outgrown the boy. And we may go still further and say with truth, that there are old, gray-headed men, away on the shady side of life, who even congratulate themselves that they are boys in *feeling* if not in *fact*. In the “old country,” a young nobleman addresses his aged footman as “my lad,” and in the South, before the war, all male negroes were called boys, and the females, no matter how old in years, were called girls; save in some cases, when an old woman would be called “Aunty,” and an old man “Uncle;” but they were regarded and treated as boys and girls in character. We find these differences among human beings all over the world. One person becomes matured at thirty, forty, or fifty years, and being symmetrically developed in all his faculties, puts on the character of maturity and manliness; he is dignified, self-relying, capable of reasoning, forms his own opinions, comes to correct conclusions, and is a self-defending, self-controlling, independent, manly *man*. Another, no matter how old in years, *lacks mental development*; he may have a large brain, but the faculties are dormant, never having been awakened or developed; he is still iron in the ore, timber in the tree, marble in the quarry, and so he will remain all through life.

Why? Because, lacking Self-Esteem, he is without dignity; being without Firmness, he lacks decision and perseverance; and so he remains in a subordinate position all his life, perhaps remaining under foot or in the way, and a dependent. These “old boys” are generally clownish, without weight of character; are weather-cocks, shifting with the wind; they float down the stream, seldom or never rowing across or against it. Besides, they usually adopt all the coarse and bad habits of the vicious, such as smoking, chewing, and drinking, and have not enough grace, self-denial, decision, or strength of will to overcome one or the other. Having no mental back-bone, they are limp, shuffling along in a slipshod manner, and go to their task or work pretty much as a culprit goes to the prison.

It is all very well for boys to be boys, and it is very foolish for ambitious parents to trot out their little sucklings into fashionable society, when they should be sleeping or playing with their kites, hoops, or doll-babies, and growing. Let children be children; let men and women be more than old boys or old girls. We do not object to youthful vivacity, vigor, and *vim*; on the contrary, we would have the aged retain such perfect health, joyousness, and buoyancy that they may overflow with healthful vitality. There is no excuse for the aged becoming acrimonious or sour; on the contrary, as they ripen into years for the

heavenly harvest, they ought to be goodly and godly, full of justice, kindness, faith, hope, and charity, the passions and selfish sentiments being kept in complete subjection. It is too often the case, however, that we meet only grumbling old scolds with gray hairs and vinegar visages. Such persons have been brought up under false philosophy and wrong influences, and if we should judge them by their actions, we should have to accept at least that part of their creed which insists on the doctrine of total depravity. They have not yet learned that sickness is sin, whether it be inherited or acquired. When Phrenology shall be thoroughly understood, and when parents generate and educate children on correct physiological and psychological principles—when they understand and teach the necessity of a full and symmetrical development, wherein all the organs of the body and all the faculties of mind shall be thoroughly developed, trained, and disciplined, we shall have well-formed bodies and well-formed brains and full-orbed minds. Then boys will be boys, and men will be men.

GEN. SHELBY'S SKULL.

WE have received from the editor of the Bristol (Tenn.) *News* certain data purporting to be measurements and outlines of the skull of Gen. Evan Shelby, who contributed valuable services in the old French and Indian war and in the war of the Revolution, which followed soon afterward. According to the accounts of him, he was a captain of rangers under Gen. Bradford and led the advance under Gen. Forbes near Fort Du Quesne. In 1774 he fought the battle of Point Pleasant. In 1779 he commanded the Chicamauga expedition, and thereafter he was appointed General of the Virginia militia. He is said to have been a man of much intellectual vigor as well as of military prowess. His son, Isaac Shelby, was at one time Governor of Kentucky.

From the data which have been sent us we have been requested to furnish some account of the mental organization of the General. The measurements taken by the editor are as follows, the opening of the ear being the point of departure:

Across the center of the skull, just in rear of the coronal suture, 12 $\frac{1}{4}$ inches; across the center of the occipital region, 12 inches; across the forehead immediately above the superciliary protuberance, 11 $\frac{1}{2}$; from the junction of the nasal and frontal bones to center of occiput, 12 inches; the length of the humerus was 17 $\frac{1}{2}$ inches, and of the tibia, 14 inches.

These measurements, together with the pencil tracings showing the form of the skull in profile and also its horizontal section, indicate that Gen. Shelby possessed a large brain, with a predominance of the motive or bilious temperament. We should infer that he was a man of tall stature, strong boned and muscular. His head in mature life measured in the neighborhood of twenty-three inches in circumference. If we had the skull before us we could predicate of it a much more accurate estimate of the physical and mental organization of its owner, but from the measurements and the outlines as a guide we judge that the General excelled in perceptive intellect, was fond of out-door life and muscular exercise; that he had in great part the qualifications and leanings of the forester or hunter, and very naturally became a soldier in those wild times which preceded the Revolution. The developments back of the ear indicate the possession of much force. He was probably impetuous in action. The outline of the head indicates a pretty well-rounded forehead in the inferior or basilar region. The organs which contribute to independence, firmness, and aspiration are well marked. He acted a part which was essentially independent; preferred to lead rather than to follow. He was, however, by no means insensible to the ties of social life, was warm in his regard for friends and deeply interested in home affairs. His interest in children was by no means a weak feature in his character. He was earnest, thorough-going, sturdy, determined, courageous and valorous. The editor of the *News* states that the forehead seemed very low and *retroussé*. From our experience with crania we are not inclined to consider the outline as

indicative of a very low forehead. If we could clothe this skull with flesh and blood and with the integuments of vigorous manhood, and surmount the whole with the strong and somewhat bushy hair which the General probably had in his prime, he would compare well with the average of foreheads which we meet with every day. The length of the humerus indicates a man of lofty stature and of unusual physical vigor. The General, take him all in all, was eminently a man of action rather than a man of thought.

A NEW HEALTH JOURNAL DEMANDED.

FOR fifteen years we published, as an accompaniment of the PHRENOLOGICAL JOURNAL, a health journal, devoted to the dissemination of knowledge on all subjects pertaining to the preservation and recovery of health. It obtained a circulation of more than fifty thousand copies, and became the leading, as it was the first, popular health journal of the world. It advocated a life in harmony with the laws of life for the maintenance of health, and the employment of hygienic agencies in the treatment of disease. By means of its teachings thousands became better acquainted with and more observant of the conditions of health, with correspondingly improved vitality and immunity from disease; and other thousands were enabled to be their own physicians in ordinary cases.

But having concluded to go abroad on a traveling and lecturing tour for an indefinite period of time, we parted with it, and since have issued no periodical except the PHRENOLOGICAL JOURNAL. We have, however, been frequently urged to reinstate the old monthly or establish a new one of the same general character with the "modern improvements;" and now, having the working force and material at command, after considering the matter seriously, have decided to publish a new monthly of forty pages, or more, of the form of the PHRENOLOGICAL JOURNAL, to be entitled "THE SCIENCE OF HEALTH," and shall do so, at a cost to subscribers not exceeding \$3 a year, to contain sterling articles from the best writers, illustrated with original and selected cuts. "THE SCIENCE OF HEALTH" will be the organ of no person, sect, institution, or business, but a medium of communication between all. It will advocate the *cause* of HEALTH REFORM, explain the *processes* of Hygienic Medication,

and instruct the PEOPLE how to get well and keep well. The special aim will be to promote HEALTH AT HOME, and enable individuals and families, so far as possible, to treat themselves successfully when sick. Who wants it? Who will have it? "What answer?"

DEATH OF PROF. MORSE.

ON the 2d of April this distinguished American died. His fame being world-wide, it is scarcely necessary for us, at this time, to give an extended outline of his career. Had he lived until the 27th of the month, he would have completed his eighty-second year.

In early life Prof. Morse had a strong passion for art; and previous to 1815 had executed several works of merit. He found little encouragement, however, in the prosecution of his favorite employment at that early day, and from necessity he devoted much attention to other subjects. About the year 1830 he became interested in electro-magnetism, and gave much time to its investigation with a view to applying it in the transmission of intelligence.

In the course of his experiments he suffered no little disappointment and persecution, but finally triumphed; and his triumph is crystallized in the vast web of wire which is spread over the inhabitable world.

THE WORKING-WOMEN'S PROTECTIVE UNION OF NEW YORK has become well established; the good service which it has rendered to the struggling has developed its own strength, and commanded the respect and support of the benevolent. An important feature in its operations is the practical interest taken in protecting the needy from the cruelty of unscrupulous employers. In one of its recent circulars, the significant statement is made that "the Union has prosecuted to final judgment in the courts *fifteen hundred* cases of fraud against working-women, and by these legal measures *compelled* the payment of wages due and withheld, to the amount of *six thousand dollars*. The Union enlists our hearty sympathy, for we can have little or no patience with men who withhold the earnings of exhausting toil. The operations of this Society are administered by able hands, and we trust that the comparatively small amount required to endow it permanently—less than \$50,000—may be secured.

Department of Literature, Science, Education.

THE FIRST CHAPTERS OF GENESIS, CREATION OF MAN, ETC.*

PERHAPS nothing has done more toward driving scientific and intelligent men into skepticism than the apparent conflict of the unmistakable teachings of geology and the first eleven chapters of Genesis. Any views which will reconcile beyond controversy the book of nature with the sacred Scriptures, and thus disarm skepticism of one of its chief weapons, would be received with joy by every Christian.

We read, "The letter killeth, the spirit giveth life." How true the first part of this statement is in regard to the first chapters of Genesis can be seen in the past; the latter declaration will be seen to be true hereafter.

If we go back in the history of our race no farther than the foundation of the Roman Empire, we find that literal history is lost in allegory; and the mythological writings of the ancient Greeks and other Eastern nations, and the hieroglyphics of Egypt, prove conclusively that the ancients used composed history, natural forms, and even unnatural imagery, to convey intellectual and spiritual ideas, to an extent unknown at this day. It is admitted, I believe, by commentators, that the first chapters of Genesis were written long before the days of Moses, and copied by him.

With the facts already accumulated with regard to the style of writing used by the ancients, it would seem that Biblical students, before they attempt the impossible task of reconciling the first chapters of Genesis with geology, should stop and inquire whether these chapters were ever intended as a literal history of the creation of the material earth, and of vegetables, animals, and man. If the sacred Scriptures are what they profess to be—the Word of God—it is evident that when correctly understood they must be in harmony with God's works.

If the chapters under consideration are to be understood to refer to the creation of the mate-

rial world, they plainly teach that creation was finished in six literal days, and to stretch these days out into indefinite periods of time, is to do the greatest possible violence to Divine Revelation.

But it seems to the writer that these chapters of the sacred volume contain within themselves unmistakable evidence that they never were intended as a history of the material creation. Let us take a hasty look at some of the most prominent points which must strike the eye of every careful reader. The existence of light, and day and night, before the creation of the sun; the growth of vegetables and trees bearing seed unaided by solar rays; a garden eastward in Eden. These are but a few of the inconsistencies, when regarded as a literal history; but what shall we say of "the tree of life also in the midst of the garden, and the tree of knowledge of good and evil,"—were these literal trees? Do not their very names show that they were spiritual or mental, and not literal trees? Can we see any good reason to suppose woman was made from a literal rib taken from man? Do serpents talk? and did not Adam and Eve have the use of their natural eyes until after the fall? and if they did, what kind of eyes were opened when they discovered that they were naked? and where did Cain get his wife? Who were the sons of God who took wives from the daughters of men? and what shall we say of the ark and flood as described, taken as a literal history? Why, simply that the former was totally insufficient in size for its contents, and that the facts and arguments against the idea of a universal flood are so perfectly unanswerable that able Christian philosophers and commentators have been compelled to abandon it, and substitute a local flood covering only a part of the earth,—how far-fetched this!

Emanuel Swedenborg, writing more than a century ago, therefore before the present geological discoveries, declared that the first chapters of Genesis were purely allegorical; that truths vastly more important to all men than a knowledge of the literal creation are therein contained. The earth described is the mental earth, or mind of man. The six days are so many states of the regeneration of man. In

* J. E.—evidently a New Churchman—gives us his views on the first chapters in Genesis, and on the creation of man, from his standpoint. This JOURNAL is open to a discussion of important religious and secular questions, but not to sectarian controversy, and we are always glad to have the views of sincere religious thinkers.

the beginning signifies infancy, and before and at the commencement of regeneration. To create and to form signify to regenerate. Heaven here signifies the internal man, and earth, before regeneration, the external man. The first state, or day, indicates infancy, previous to regeneration; and the first motion is the mercy and spirit of the Lord acting on the remains or knowledge of the true and good stored up in the memory of the individual. The earth without form and void signifies man before regeneration—void nothing good, empty where there is nothing true. "The faces of the Abyss are the lusts of the unregenerate man and the falsities thence originating, of which he consists and in which he is totally immersed."

"And God said, Let there be light, and there was light," signifies the first state of regeneration, when man begins to know that the good and the true are of a superior nature. Men who are altogether external do not know what good and truth are. They think all things to be good which relate to self-love and love of the world, and all things to be true that favor those loves, whereas such goods and truths are evils and falses. When regeneration commences, man first begins to look to the Lord, and as he progresses he comes to see that all life and truth are from Him. Light is called good because it is from the Lord, who is good itself. Whatsoever is from the Lord is light, and is compared to day; whatsoever is man's own is of darkness, and is compared to night. Evening, then, signifies every preceding state or that of shade or of falsity, or no faith—mental darkness; morning, every subsequent state—being one of light, or of truth, or of the knowledge of faith.

But to give even a synopsis of the spiritual contents of these chapters would occupy too much space. I will, therefore, simply glance at a few points. If the reader would see them rationally explained in detail, let him read Swedenborg's "*Arcana Coelestia*," the first volume, and of two things he will be convinced: first, that these chapters are a special revelation from God to man; second, that they contain the most wonderful history of the regeneration of man, and are full of the most beautiful spiritual truths, which every man can apply to his own life at this day.

As there is a mental earth as well as a material earth, so there are mental gardens as well as material gardens. If we permit the Lord's love to flow into our hearts, and His truth into our understandings, and are thus warmed and

enlightened and live good and true lives, our garden is planted eastward, or in the direction of the sun or the Lord; for a garden signifies intelligence, and Eden, love; and eastward, toward the Lord. A tree signifies perception; a tree pleasant to the sight, the perception of truth; a tree good for food, the perception of good; the tree of lives, love, and faith thence derived. The sight is indeed pleasant and beautiful, when man perceives that all truth and goodness are from the Lord, and it is good for him to partake of the fruit of such trees or perceptions; and he partakes of the tree of lives when he opens his heart for the reception of the Divine Love, and his understanding for the reception of Divine Truth, and permits heavenly affections to flow forth into acts of kindness and good will to his fellow-man. We can only receive as we give to others; this is a law of spiritual life. When the Lord and His Word are recognized as the source of light and life, and we look to Him, worship Him, and strive to keep His commandments by shunning evil in our every-day life, and doing good, and are governed by our highest perceptions continually, then we are built up, by the fruit of the trees of the garden, into an angelic form.

A tree of knowledge of good and evil signifies faith derived from the sensual principle or science, instead of from the Lord and His Word. The reader will notice that in the second chapter of Genesis the tree of lives was said to be in the midst of the garden, but in the third chapter the tree of which they were not to eat was in the midst of the garden. In the most ancient church, or the Adamic Church, before the fall had commenced, men perceived continually that all the truth and goodness, and all ability to do good they possessed, were from the Lord, that in Him they lived, moved, and had their being. The tree of life then appeared to be, and was, in the midst of the garden; but when men commenced to decline gradually, this clear perception began to fade from their minds, and they began to think that they had knowledge and goodness of themselves, or that they were self-derived. When this state was reached, man was in a deep sleep as to genuine spiritual truths; then the Lord, that our race need not perish, took a rib from Adam and built it into a woman. The rib is from the bones, which possess little vitality, and denoted man's selfhood, which the Lord so changed and elevated that men, while acting apparently as of themselves, could be taught and could understand that this was but an appearance, and that all

which they had was from the Lord; thus self-love could be subordinated to love of the Lord and of the neighbor. Although they knew that all was from the Lord, yet the external appearance, or perception, was that they were acting of themselves, and consequently the tree, of which they were not to partake, is here represented as being in the midst of the garden; but man was forbidden to make self-love, love of the world, or love of sensual gratifications the chief aim of life, and to claim to be wise of himself, and to be governed by sensual appearances instead of Divine revelation; for to do this would be to partake of the fruit of the forbidden tree.

The serpent signifies the sensual principle in man, and the woman his self-hood or self-love, and man the rational principle. The serpent is one of the lowest animals; it crawls upon the material earth; so the sensual part of man is the lowest of his spiritual organization, and crawls upon the mental earth; but when our sensual nature is in subordination to our higher faculties, and we eat and drink to give us healthy bodies, love money for the sake of the uses which we can perform with it, and desire to rule over others only so far as we can benefit them by so doing, and subordinate all natural knowledge to revealed truth, then our sensual is harmless and in true order; but when we allow our self-love to be tempted to make selfish and sensual gratifications the chief object of our lives, or to eat and drink simply to gratify appetite; desire to outshine each other in vain display; love money for the sake of money; love to rule over others to gratify our self-love; believe nothing in regard to the Lord

and spiritual truth, save what we can derive from our own intelligence; and begin to have more confidence in sensual things and our own reason than in revealed truth, then the woman, or our self-love, has been seduced by the serpent, or our sensual; and if our understandings consent, the man also partakes of the forbidden fruit.

Cain and Abel. Cain, or Faith, is first born with us, for we must know the truth before we can act in accordance with it; but charity is its brother. When we allow faith to destroy charity, and believe we can reach happiness without obedience to the Divine commands by simply believing or having faith, then Cain kills his brother in our souls.

Waters, in a good sense, when used to quench thirst and to cleanse the body, signify truths; but in the opposite sense, or when filthy or destructive to life, they signify the perversion of truths—falses; and the Flood was a flood of evils and falses which overwhelmed the mental earth and destroyed all genuine spiritual life, excepting of those preserved in the ark. The ark was a spiritual ark, or a new dispensation or Church from the Lord.

But this communication is already too long. If this hasty glimpse of the spiritual truths contained in these chapters which, I believe, have been revealed by the Lord through Swedenborg for the men of this day, shall induce the reader to study the first volume of Swedenborg's "*Arcana Cœlestia*," it will have answered the end for which it has been written. To every man I would say, "Read, and judge for yourself," not judge before you read, for to do so would not be the part of wisdom. J. E.

NATIONAL INFLUENCE—ENGLAND'S DECADENCE!

HOW thoughtlessly is this phrase used by many whose lips should be closed to censure in regarding the noble work this grand old nation has wrought for mankind! To the thoughtful, intelligent friend of progress, she should never be contemplated without admiration and gratitude. Looking back to the period when the greatness of England commenced, we find the world shrouded in ignorance, superstition, and abject submission to the dogmatic rule of ecclesiastical tyranny. Freedom of the mind was unknown, and the individual assertion of it was invariably met with the severest penalties which an ignorant priesthood and its governmental tools could

inflict. Out of this condition that little island and morally arose like a volcanic formation from the sea, and shed its illuminating rays over the wide expanse of mental sloth and ignorance. Magnetic threads of intelligence issued from its illuminated atmosphere, and penetrated the brain of every progressive soul throughout the oppressed nations of Europe, and gave hope and encouragement to their long suppressed aspirations. Onward and upward, increasing in intensity and volume, this grand moral illumination spread beyond the sea-girt shores of its own little island, until it overspread the neighboring nations with a portion of its own brilliancy, and in

this new and glorious atmosphere their people were enabled not only to perceive their rights but gradually acquired the knowledge necessary to maintain them. Nations, like individuals, have their missions. They are the instruments employed by the Divine Mind through which mankind is being raised above the mere animal plane, and when the periods of their decline have arrived, regret for this fact should be tempered with admiration of the work they have accomplished. This is true of the nation and of the individual. Theodore Parker when dying in Florence told a friend that there were *two* Theodore Parkers: one was dying in Florence, and another was living in Boston. His enlarged mind fully comprehended this truth. He knew that the little mound which had risen from under his feet, and which had gradually become more and more elevated, which had risen as his usefulness had increased, and upon which he had been for so many years standing, would not collapse when his earthly body had been removed from it. Theodore Parker lives to-day, and not half his work has yet been done. He will continue to live as long as his works are read and his influence felt. This is the status of an individual, and this equally applies to all the really great and good men now living or who have lived. A conviction of this truth should animate every lover of his fellow-men and encourage him to work heroically for their good. Let the author who laboriously plies his pen in elucidating useful truths take courage even if the fruits of his labors are not made manifest to him in his present life. Thousands of neglected books have been read by unknown youths who in after-life have proclaimed the knowledge of the truths thence derived in trumpet-tones.

Many a speaker has striven to gain entrance into dull or unwilling ears for his utterances, whose courage has faltered and whose hopes have almost died within him. Yet could he have foreseen what a bountiful harvest was to spring from even one little seed which he had planted, his heart would have thrilled with joy and thankfulness at the prospect. All are not authors, neither are they speakers, but every one is capable of speaking a kind word and doing a charitable deed. The writer of this believes that

he is a better man to-day than he otherwise would have been, from his having been the recipient of a kind act rendered him by the obscure occupant of a cabin in the Rocky Mountains. The deed itself was not of large proportions, but a conviction of the disinterestedness of its character entered so strongly into his mind that he felt a new and vivid conception of the brotherhood of man. Sometimes these little kindnesses are received almost without recognition; then, again, under more favorable influences, they are the spark which explodes a mine of selfish, narrow habits of thought, and opens an entrance into the heart and mind for the appreciation of noble deeds and aspirations. Every mortal being is the center of a moral magnetic influence, and, strange as it may seem, the center thus established during earth-life remains and acts with more or less energy for an indefinite time. Psychometry teaches us that everything that has ever existed has left its impress. Prof. Draper proves that if a shell be calcined and reduced to powder, and an object like a ring or key be laid upon it for a certain length of time—then, having taken them into a dark room, on removing the key and applying a slight heat, the exact form of the key or ring will appear; and if forty or more different articles be successively laid upon it and removed, the form of each article will become visible in the reverse order in which they were laid upon the powdered shell.

Sir David Brewster says: "All bodies throw off emanations in greater or less size, and with greater or less velocities. These particles enter more or less into the pores of solid and fluid bodies, sometimes resting upon their surface and sometimes permeating them altogether. These emanations, when feeble, show themselves in images; when stronger, in chemical changes."

Much more could be said upon this subject tending to prove the permanent effects of all magnetic and physical influences. As our moral natures, to a great extent, act in concert with and are dependent upon the magnetic forces of nature, we can not escape the conclusion that our moral forces are governed by laws in a great degree similar to those which govern magnetic forces; and if this is correct, the results of moral actions and moral

ideas are in themselves permanent and enduring.

As it is with individuals so it is with families; as with families so with nations, which are merely assemblages of families. The influence of a nation imbued with the spirit of progress is as the influence of millions of individuals compared with that of one of their number. Some nations, like ancient Greece and Rome, receiving their light from Egypt and the farther East, in their turn were elevated to a higher plane, and irradiated the barbarous minds of the inhabitants of Southern Europe. The rays of knowledge thus disseminated mingled with the magnetism of the minds of the people of those barbarous countries, and in each nation was evolved a kind and degree of intelligence in harmony with their established habits and original structure of mind. Each people made a different use of the knowledge obtained; and as each pursued, to a certain extent, a different path in its search for further light, much knowledge was accumulated by each, which otherwise would have remained unknown. With the knowledge imparted by Rome was the gift of its ecclesiastical system; and the nations receiving this system struggled in their onward race for centuries, bearing the burden of priestly tyranny.

The discovery of the art of printing was the commencement of a new era in the progress of mankind, and nowhere was this young Hercules so carefully nourished as in the country of our English forefathers. Instinctively they cultivated his strength, and enlisted him on the side of human rights, until with them his arm is strong to shield the oppressed of all nations. Many have been the errors committed—many the acts of cruelty perpetrated while this moral strength has developed; but with all her faults England has stood like a beacon-light, shedding her rays over other lands, in the light of which their people have advanced in the paths of progress and toward their destiny of universal brotherhood.

In that light our American forefathers were born and reared; and our grand country affording the amplest scope for enlarged thoughts and action, we have developed into a race sharing the knowledge acquired through centuries of experience by our Eng-

lish progenitors with that acquired by our own experience and our own development.

We can boast of being at least as enlightened as the English themselves; but in our self-gratulations we should not lose sight of the fact that to England we are indebted for much that we know; and that had she not led the way, and through toil and bloodshed secured for our fathers to a large extent a recognition of the rights of man, we should not to-day live in the full enjoyment of our national and individual liberties.

The contemplation of England's decadence, real or probable, to an American, and especially to a Protestant American, should be tempered with regret, and it demands the acknowledgment of the great services she has rendered to the world, and more especially to our own loved land.

JEROME ROSS.

THE STONE-CUTTER;

OR, THE END OF ASPIRATION.

ONCE upon a time there was in Japan a poor stone-cutter, a simple workman in the quarries. His life was rude, he worked much, he gained little, and was not at all contented with his fate.

"Oh, if I could only be rich enough to rest, to sleep on thick matting, wrapped in a kirimon of soft silk!" Such was the sigh he breathed to heaven. An angel intercepted it.

"It shall be according to thy desire," said the angel to him. And he at once became rich, and he rested, and he slept on thick matting and wrapped himself in a kirimon of soft silk.

It happened that the Emperor passed by. He was preceded by heralds on foot and horseback, followed by a brilliant escort of cavaliers, and surrounded by persons who held over his head an immense parasol, resplendent with gold.

"What good does it do me to be rich?" murmured the man, "as long as I have not the right to go out with an escort, and my head protected by a golden parasol? Why am I not the Emperor?"

"Thou shalt be," said the angel.

And, indeed, he became the Emperor. He had an escort of cavaliers before and behind him, and people who held above his head an immense parasol, resplendent with gold.

However, the sun, with his ardent beams, dried up the country, and the dusty road, quivering with his brightness, fatigued the eyes

"It is a great advantage to be Emperor," cried the man, "when the heat of the day exhausts you and the sun never ceases to make you feel his power! But if one could be the sun!"

"Behold! Are you satisfied?" the angel asked. For he had become the sun, and he darted his beams up and down, right and left, and all around him; and he scorched the herbage of the earth, and the faces of the princes upon the earth.

But now a cloud thrust itself between the earth and him; it held back the rays of the sun, and prevented them from falling upon the earth's surface.

"There is strength," cried the sun, "a cloud capable of resisting my power. It would be better if I were a cloud."

"Very well," said the angel.

And the transformation was at once accomplished. The new cloud placed itself haughtily between the sun and the earth, and so thoroughly intercepted the rays of the sun that it soon saw the earth covered with its shadow. Then it caused big drops of rain, and pouring showers, and water-spouts, to fall on the lands, so that the torrents burst their bounds, and the rivers spread over and devastated the fields.

Nothing resisted the force of the inundation; only a rock defied it, perfectly motionless. In vain the bellowing waters beat it in their fury; the rock yielded not, but the foaming waves died at its foot.

"A rock, then, is my superior," said the cloud; "I would rather be in its place."

"You shall be," said the angel.

And he was transformed into a steep, unshaking rock, insensible to the rays of the sun, indifferent to the torrents of rain and the shock of the tumultuous waves.

Nevertheless, he distinguished at his feet a man of poor appearance, badly clothed, but armed with a chisel and a hammer; and the man, with the help of these instruments, struck off pieces of the rock, which he dressed into stones proper for cutting.

"What is that?" cried the rock. "Has a man the power of rending pieces of stone from my breast? Shall I be weaker than he? Then it is absolutely necessary that I should be that man."

"Have your will," said the angel; and he became again what he had been—a poor stone-cutter, a simple workman in the quarries. His life was rude, he worked much and gained little, but he was contented with his lot.

HARVEY M. MUNSELL, THE "COLOR-BEARER."

A ROYAL and brave nation never forgets its battle-fields, its struggles, its heroes who won its laurels. It does homage to fidelity in positions of responsible command, and as readily accords the honor due to those who faithfully execute judicious orders, and thus aid in winning the field. Every record of patriotic bravery is welcome, and exalts a nation; and in any and every department of life a nobly-contested and bravely-won field adds strength and dignity to character.

Harvey M. Munsell, third son of James Munsell, was born at Painted Post, Steuben County, N. Y., January 5, 1843. In 1848 his mother died, and in 1849 his father went to California, leaving him in the care of strangers. Tiring of an uncongenial, useless, and homeless life, without asking permission, which he was sure would not be granted, at the tender age of eleven years he left Painted Post, and went to Venango County, Penn. Here he had some relatives, with whom he

lived until 1858, when he went to Belvidere, Ill., and there resided with an uncle, and attended school until 1861. When the "Proclamation" calling for troops to maintain the integrity of the Union was issued, he returned to Pennsylvania, and enlisted for three years in the Thirty-second Pennsylvania Regiment, at Philadelphia, afterward known as the Ninety-ninth Pennsylvania Volunteers.

He was soon assigned to the position of corporal, then sergeant, and then color-sergeant of the regiment, and bore the standard through thirteen pitched battles, without receiving a wound. He received a handsome flag from his regiment as a testimonial of the esteem in which he was held by his comrades in arms, and also other evidences of honorary consideration. A published notice of him said:

"This brave and noble young soldier deserves any promotion which may be accorded to him for gallant and meritorious conduct."

Honorable mention was made of his gal-

lant conduct by his commanding officers in their official reports to the War Department.

When our lines faltered and fell back before the Georgia columns at Fredericksburg, with characteristic decision and promptness he waved his colors in front of the yielding army, saying, "Stand your ground and defend your flag, or I will give these colors to the rebels;" and they did advance, drove

bore the colors on another field he would meet death, and well knowing that his presentiment could not be duly appreciated, he sought a change of position, first through his captain, then through his colonel, and then through Gen. Gregory, requesting a furlough to attend the Free Military School at Philadelphia, and take command of a colored regiment; but his request was not granted.



the Georgia columns from the field, and held possession of it.

At the expiration of two and a half years of active service, he, with nearly the entire regiment, re-enlisted for the war, and returned to Philadelphia on a furlough for thirty days, and while there received the testimonials to which we have referred. But, somehow, his intuitional impressions assured him that if he

However, determined to secure his end if possible, he marched boldly to the War Department, and then and there saw all who were in waiting to ask furloughs ordered back to join their regiments. Nothing daunted, he laid his flag on Secretary Stanton's desk, saying, as he did so, that he would like a furlough, in order to enter the Free Military School at Philadelphia; and

unfolding the banner, the Secretary read the well-earned record inscribed thereon, with sparkling eyes. Rising from his seat, Mr. Stanton cordially took the hand that had never faltered in service, saying, as he did so, "Mr. Munsell, you are the first man, either soldier or civilian, who has, when asking a favor, ever presented a living testimonial of any service rendered the Government up to this date;" and without further delay the furlough was granted.

He entered the school, passed an honorable examination before Gen. Casey, but declined a command offered him, and then returned to his regiment immediately after the battle of the Wilderness, and was appointed first lieutenant and then captain. He was then not quite twenty-one years of age. This position he held until the close of the war, and with his command participated in the battle at Cold Harbor, and also in several engagements before Petersburg. The color-bearer of the Ninety-ninth fell severely wounded in the next engagement. He was captured in the battle of Deep Bottom, on the James River, Virginia, July 27, 1864, and held as prisoner of war until February 22, 1865. He shared the horrors and triumphs of Libby Prison for about two months, exchanged them for those of Greensboro and Salisbury, N. C., and was subsequently transferred to Danville, Va. He was mustered out of service July 25, 1865, and soon after entered and graduated from a commercial college in Binghamton, N. Y. In 1866 he became agent for the New York Life Insurance Company in Boston, Mass., and in 1867 was appointed general agent at Philadelphia for the Milwaukie Northwest Mutual Life Insurance Company, and as such was decidedly successful. In 1868 the Company removed his office to its present locality, 160 Fulton Street, corner of Broadway, New York city; and to quote from the Vice-President of the Company: "Mr. M. is one of the most persevering, enthusiastic, and successful agents that any well-organized company could well secure."

Phrenologically, Mr. Munsell has a good body, which is solid, compact, and active; he is made to work and willing to work, and liable to over-work; his vital system is not quite able to give adequate support at all times to his active, energetic brain. He

ought to be known as a social, loving, friendly man, as one who highly enjoys domestic and social life. He loves variety of thought and action; has much ambition, a sensitive regard to reputation, and a fair degree of pride.

He is exceedingly firm, but has a friendly, kindly benevolent spirit, which disposes him to forgive and let a delinquent up, and try him again; but the persistent sinner finds with him a hard road to travel.

His sense of justice makes him feel strong when he believes that he is right; he is cautious without being timid, and not extra secretive. Hope is not large; he therefore does not predicate too much of the future; feels sure of just what he can work out. Hence he works out his success with confidence.

He has fair reverence for eminence and sacredness, but the feeling is not a weakness of his; he is neither obsequious nor submissive, yet can bend to the helpless, the weak, and to little children.

He readily reads mind and motives; comprehends character and disposition, and seldom asks advice relative to persons, but may ask for facts relating to their pecuniary accumulations and financial standing.

If a man have petty larceny in his face, Mr. Munsell accepts no recommendation for him.

He possesses a sound, compact, thoughtful cast of mind, has a disposition to reason and criticise, and wants the gist of the matter; is not over-awed by vastness of bough and foliage, but seeks to know if the roots and trunk are sound; he grasps general ideas and remembers incidentals by association. His constructive talent is good. If an engineer he would be sound, clear, and inventive, always working up toward some better way of making the machine, or of building a new one. He appreciates property, economizes time, labor, wear, and tear; and would like to see the artificial catch by which the boy at the coal mine contrived to save himself from using the lever to operate the ancient steam-engine, and instead of blaming, would have applauded him. His perceptive faculties are active, and lead to compact criticism; his language is also compact. He prefers the "Minie rifle" to the old-fashioned shot-gun; is sharp, quick, decisive.

PRIMARY OR PRISMATIC COLORS.

I BELIEVE the day is not far distant when the long-maintained theory of Isaac Newton on the origin of the prismatic colors, viz.: that they are the product of the sun's white light, and displaying, as variously estimated by different philosophers, from three to seven primary colors, will be replaced by some more simple and satisfactory doctrine.

When rays of light, emanating directly from the sun, or indirectly from objects, are made to pass through a prism, their forms and direction are subject to marked distortion, and as the prism is turned, display the most vivid colorings. When the prism is used to examine the sun's rays, experimentalists always find it necessary to turn it until the round spot of light, admitted through a hole in a shutter into a dark chamber, is changed or distorted into a long parallelogram before the dissected (so called) colors appear. Now, why may not this distortion of form and direction of rays apply also to the colors evolved by the prism, as being only an abnormal expression of the true components of what we call white or solar light, by the peculiar effects upon the eye of such refracted rays of light, which are seen only when passing through a prism, or refracted from some finely divided laminous or corrugated surfaces? as also when the rays of light are refracted from vesicular-formed clouds, rain-drops, and greasy surfaces?

These prismatic colors, when imitated and mixed in the most artistic way, have never yet resulted in the reproduction of a simple white, or anything approaching it, except in the instance of re-collecting the rays, or colors, after having passed through a prism, by interposing a lens. But this would seem to be too simple a process for making and unmaking light, in its supposed combination of colors, to be adopted as its explanation. The fact is, that the lens only re-collects the scattered rays, and so restores them to their natural direction, form, and simple white.

Are light, heat, and actinic rays combined in solar effulgence only "atoms turning on their axis," as some scientists assume, and so producing only *immaterial* colors? or are they chemically combined *materials* in definite proportions? and if the latter, can the mere refraction of a prism separate and a lens restore them to their natural compounds? If so, we certainly have an heretofore unsuspected ethereal chemistry, operating very tangibly upon matter by simply looking at it through solid

glass. Or, if the former, is it considered that light, heat, and actinism are only "modes of motion," as some scientists affirm, contiguous through the ethereal atoms of space, and so impacting upon our atmosphere and the more solid bodies of our earth by the mere "clashing of their atoms when turning on their axis," without incorporating anything with the elements of our globe? If they do mingle anything, it must be something besides mere impact which chemically combines, as the changing compounds in vegetable growth; for instance, under the action of solar effulgence, carbon separates from oxygen (in carbonic acid gas), that the former may enter into vegetable compositions; and this would fully warrant us in believing it to be a very *material* chemical admixture; as it is hardly supposable that mere "mode of motion"—impact, concussion—would knock those combined gasses to pieces, and send the required atoms of carbon only to nourish vegetation.

As to objects exhibiting special colors, by transmitting some and absorbing others of the primary or prismatic hues of solar light, which philosophers suppose, this presupposes that such colors are absolute materials, else they could not be variously absorbed, and, consequently, that solar effulgence has something which does incorporate itself into other materials, and so produces marvelous compounds; but not alone effecting such changes upon organic and inorganic bodies (with its light, heat, actinic and life-promoting properties) by simple impact, concussion, or "turning of atoms on their axes," or "clashing of atom upon atom," as named by an astute scientist in treating of the passage of light.

The colors ascribed to the composition of white or solar light either exist or they do not exist. If the prismatic or primary colors exist, they must be a material, as materiality is necessary to existence, and so can not be separated by simply passing through a prism to the eye; and if they do not exist they are immaterial, and so can not be analyzed, not being a part of anything; in either case, the prism can not be an analyzer of light. Hence refraction, that abnormal condition of light produced by the prism, is the sole cause of the effects of colors; they have no agency in forming white light which is capable of detection by the prism, or by any other known method. Look at the effects of solar and artificial lights upon vegetation; are they the same? yet the

prism makes no distinction, though, as a very marked distinction, which all can test, solar heat will pass directly through plate-glass, without warming it, while heat from a fire will not pass directly through the same, nor until radiated by absorption; hence solar heat can not be derived from the sun's conflagration, as assumed by spectroscopists. The prism, when admitting the passage of *artificial* light, produces the same prismatic hues as proceed from the solar; and shall we thence infer that the composition of solar and artificial light are analogous? Again, in what is called polarization of light, produced by the passage of solar or artificial light through a prism and a plate of tourmaline, which gives under the microscope brilliant prismatic hues to many minute crystals, and is so convenient a test of the angles of their very minute planes—we find the evidence of the identity of solar and artificial light. Also from soap bubbles, vesicular clouds, rain-drops, and the finely divided laminae on pearl surfaces, and upon coal and greasy surfaces, the same prismatic hues are produced by distorting or refracting rays of light without a prism, and are also evidence of their identity of composition. Are such results only the effects of the abnormal conditions of light when refracted by such distorting surfaces? I am, and have been for years, strongly impressed with the view that solar and artificial lights do not embrace in their composition these supposed primary or prismatic colors. These colors through the prism seem to emanate from every object illuminated, however weakly, by the sun or artificial light, when the prism intervenes between the eye and object in the required direction, and the colors constantly vary, on the same parts of objects, as we revolve the prism.

Homogeneous white surfaces, such as snow, will exhibit broad patches of vivid orange, rose, and purple colors through the prism, while shadows on the snow will display vivid greens; and in a cloudy day, when the snow is in shadow, all these colors will be vividly and variedly seen; and when the prism is a little turned these hues will be distorted on the borders of objects into long shreds or fringes of brilliant colors. This distortion probably indicates false coloring, as it is not to be supposed that the homogeneous white of snow, to the eye, is in reality invested with such brilliant colors, and so, probably, indicates that the coloring is entirely due to the distorting abnormal refractions of light by the prism, and in no way shows that such colors proceed from the sun's

white light dissected, it being to the eye as homogeneous as the snow.

The same blaze of colors is seen on a white-washed fence, or upon a surface of black iron, whether in the sunlight or shadow, and the more diversified the forms or figures on all objects, the more varied and vivid are the colors. A white muslin curtain in the shade will display a brilliant border of varied colors, and the remainder of the plain surface will show only its natural white—all of which is changed by a turn of the prism, just as in microscopic polarizations of light upon crystals, changes are wrought by revolving the tourmaline.

Thus, I think, is clearly demonstrated that the prism, as an analyzer of light, is more of a philosophical toy than an indicator of the composition of solar or white light; notwithstanding the long and justly revered opinions of Isaac Newton, and the many respected links in his chain of followers.

In conclusion, it seems most probable that the so-called primary or prismatic colors are not the components or parts of solar or white light, but are simply the effects upon the eye of refracted or distorted light, and that the hues are varied or produced only by the angle of refraction; while solar light, heat, actinism, and its life-promoting properties, are the actual incorporating effects upon all matter of a *material* called Electricity, which, in its dual character of attraction and repulsion, is Gravitation, as well as the cause of all combinations of matter, and of the altered conditions in disintegrations—in short, the great material agent in creative force.

CHARLES E. TOWNSEND.

—♦♦♦—
ELECTRICITY AND NERVE FORCE.—Mr. J. St. Clair Gray, of Glasgow University, Scotland, has recently observed the mutual action of sulphur and phosphorus in alkaline solutions, and the idea that such action might be the source of an electric current occurred to him. Accordingly he prepared a cell containing caustic potash in solution, and placed in it sticks of phosphorus and sulphur; and he found, half an hour afterward that the sulphur remained unaffected, while the phosphorus had settled in an oily mass to the bottom of the alkaline fluid. Phosphoretted hydrogen, spontaneously inflammable, was given off during the first six days; but after this time the gas became somewhat sulphuretted, and no ignition took place. The test by Sir W. Thomson's electrometer, made by a qualified assistant of that eminent philosopher, showed the electromotive force to be 162,

while a Daniell, acting under similar conditions, exhibited 120 only. A remarkable feature of this battery was that the fluid phosphorus on being removed and washed, still retained its liquid state. Sticks of solid phosphorus were introduced, and they not only did not help the liquor to solidify, but speedily became deliquescent themselves.

Mr. Gray's object was to obtain data to support a theory on the origin of nerve force, he being convinced that the power of the nerves has an electric element in it. He was induced to make the experiment described above by the well-known facts that phosphorus is largely present in the brain and sulphur in the liver, and that an alkaline fluid is in constant circulation between them. He has tested this theory by experiments on a rabbit, and considers that he is justified in assuming that his explanation of the existence of galvanic action between the brain and liver is correct and well founded.

HOW WE WALK.

IN the PHRENOLOGICAL JOURNAL for September of last year, and in the article on "Human Locomotion," I find this statement:

"Dr. Holmes says one side of the body tends to *outwalk* the other side."

Permit me to remark that this is quite natural, as one side of the body, the right usually, is the stronger, and thus a slightly increased impulse will tend to turn the body to the left, and finally we find that we have been walking in a circle, as is the almost universal experience of man.

The writer recollects an instance which occurred to himself, and two or three others many years ago, when at Fort Gratiot, outlet of Lake Huron. We walked up the beach of the lake some two or three miles, and then started across to strike Black River, at about the same distance from the lake, and running nearly parallel with it. We started for the river, but no one had any special charge of the direction. After a walk through the thick forest we struck a glade, and in about an hour should have reached the river, as we supposed, but were surprised at hearing, quite distinctly, the sound of the surf on the shore of the lake. We turned around, and by carefully keeping the new direction soon reached the river.

Here the right side had outwalked the left, and carried us in a semi-circle. A wind, bright sun, inequalities in the ground, the company

you are walking with, a temporary weakness in one limb, being tired—all or any one of these causes is sufficient to alter the direction.

Few people besides soldiers know how difficult it is to walk in a straight line. Who ever saw a path across a field that was not wavy?

To test your ability to walk in a straight line, when there is a light snow, fix your eyes on some point across a level piece of ground; then close them and start in the direction; continue your walk for five or ten minutes. Your footprints will be an interesting study. It will also afford an opportunity to observe the variation in the length of the step—whether one foot outwalks the other.

To walk in a straight line, take two points in front of you, and when you have come up to the first select a third in prolongation, and so on as you advance.

H.

DISCHARGED FOR DRUNKENNESS.

ONCE a month or so there appears on our desk a manifold copy of the official report of discharges from the service. We have never published them. We fear to put the damning publicity to a weakness which calls as often for pity as for reproach, or hold up to scorn those who by patience and gentleness may be saved. The discharge is a necessity. No drunken man should ever handle a message, and a careful executive might even exact as the qualification for employment that rum and all its relatives be foresworn. But we prefer that the discharge be not complemented with the published shame. The lapse is sometimes the fall in a keen struggle. God only knows how keen and fierce the struggle sometimes is.

In Mrs. Stowe's "Wife and I" there occurs one of those stirring passages regarding this degrading vice which reveals its desperate tyranny. It is Bolton giving his reasons why he dare not marry:

"One sip would flash to the brain like fire, and then, all fear, all care, all conscience would be gone, and not one glass, but a dozen would be inevitable. Then you might have to look for me in some of those dens to which the possessed of the devil flee when the fit is on them, and where they rave and tear and cut themselves until the madness is worn out. This has happened to me after long periods of self-denial and self-control and illusive hope. It seems to me that my experience is like that of a man whom some cruel fiend condemns to go through all the agonies of drowning over and over

again—the dark plunge, the mad struggle, the suffocation, the horror, the agony, the clutch at the shore, the weary clamber up steep rocks, the sense of relief, recovery, and hope, only to be wrenched off and thrown back to struggle, and strangle, and sink again. If I had fallen dead after the first glass of wine I tasted, it would have been thought a horrible thing; but it would have been better for my mother, better for me, than to have lived as I did."

This picture of a noble man, who knew his weakness and his enemy, is only one of many such, not always so intense, but dark and dread with ever-constant danger. It may be a voice to some young man who reads it as he is about to yield to the first invitation to drink that which may be, within him, like the flames of hell. Let the cursed thing alone, young men. The bright water that gurgles up from the earth or glistens down the mountain-side is for all men health and hope and happiness and life.

[The above extract from the *Journal of the Telegraph* brims over with pathetic sympathy for and exhibits a just appreciation of the poor victim of inebriecy. How terrible the condition of such a one! Youth and manhood, let not these trenchant words of admonition be lost on you! "Be wise in time!"]

A SIMILE.

BY BELLA FRENCH.

As strains of music sweeter get,
As sadder, sadder they become,
So in the hearts which sin regret,
So in the souls which grief makes dumb,
A strange, wild sweetness seems to dwell,—
A note of purity and love,
Of which the lips can never tell;—
A strain of music, far above
The wailing sobs of care and grief
And desolation's blinding blast;
Then, like the sun, a sweet relief
Comes to the drooping soul at last.

TO MAKE HENS LAY.—A Southerner says:

"We have found that hog's lard is the best thing to mix in with the dough to give hens to make them lay. One cut of this fat as large as a walnut will set a hen to lay immediately after she has been broken up from setting, and by feeding them with the fat occasionally, the hens continue to lay through the winter." [We doubt if this gentleman has tried "all things," and that his oracular statement needs modification. Would not scraps, the refuse of tried lard, do as well? would not any animal food, fish, earth-worms, etc., answer? and are not old plaster, or lime, sand, and gravel, also use-

ful? Is not corn a desirable ingredient? and why not oats? In short, why not a mixed diet, including boiled potatoes, pumpkins, and other vegetables? Is not pure water always accessible, and a nice, clean, comfortable, well-ventilated house to roost in an important accompaniment?]

CUBA, THE GEM OF THE OCEAN.—Shall she be a slave? or shall she be free? The annual trade of Cuba is over \$170,000,000. In 1862 the production of the island was \$306,000,000; taxes paid in, \$37,750,000; imports, \$57,400,000; exports, \$43,400,000. The rural wealth was then estimated at \$381,000,000; wealth of towns, \$170,000,000; industrial and commercial wealth, \$774,000,000. The productions in the same year were: sugar, \$62,000,000; tobacco, \$30,000,000; other items, \$37,000,000; total, \$129,000,000. Will she come under the Star-spangled banner? Hurrah for Yankee Doodle!

EFFECTIVE WRITING.—Under the modest title of "A Fragment," the *Oneida Circular* says:

"Genius in all arts which please and produce genuine 'effects' seems to consist in being able to perceive and study the thoughts and feelings in other people's minds. Thus, for instance, it is not enough to be able to write well, in order to produce a good effect; neither is it enough to be able to observe well, or find interesting topics, or understand truth; besides all this, we must be able to throw ourselves into the minds of those we are writing for and imagine what they feel. We must adapt what we say and the topics we handle to the inner niceties of the human spirit, if we would produce a genuine sensation. People may write well, may find interesting topics, understand truth, and have a great deal to say, and still never produce a sensation by what they write, but only make a noise that other people will pay but very little attention to. Genius consists in adapting its work to the exact state of mind that it is dealing with—both on the small scale and on the great. In reading Shakespeare, Walter Scott, and such writers of acknowledged genius, you are all the time wondering how they knew so much about you—how they understood things in your thoughts that you never put into words, and didn't suppose anybody had any idea of. It is by just such knowledge as this that we shall be able to produce effects, and not without it. This is true of all the other arts as well as writing. We must know just what will make music in the general mind."

[In other words, if we would touch the hearts of readers, we must speak or write from

the heart, i. e., we hit where we fire from. If we write through Combativeness, we wake up Combativeness in the reader. So of Benevolence, Causality, or Philoprogenitiveness. If we would awaken a sense which admires the grandeurs of Nature, we must ourselves be able to picture to the reader's mind those sublime scenes which fill us with their magnificence. A dull, sleepy writer will put his reader to sleep, while one with life in him will stir you up. "Like begets like" in thought and in feeling as well as in a physiological sense.]

TAME CODFISH.—Mr. Buckland, in a recent number of *Land and Water*, gives an interesting account of a visit paid by him to a pond containing tame codfish at Port Logan, Wigtonshire. The property in question belongs to a gentleman by the name of McDougall, and consists of an amphitheater about one hundred feet in diameter hollowed out of the solid rock by the sea. All egress from this is prevented by a barrier of loose stones, through which the water passes freely. On approaching the shore of the pond many codfish of great size were seen; and when a servant woman who had charge of the fish approached with some muscles, the surface of the water was perfectly alive with the struggling fish. They came close to the edge, and after a little while permitted Mr. Buckland to scratch them on the back, and play with them in various ways. Among other experiments tried by him was that of holding a muscle in his hand, and allowing the fish to swallow his hand in the effort to obtain the muscle. These fish furnish to the proprietor an ample supply of excellent food, the flavor being considered much superior to that of the cod taken in the open sea. Whenever needed for the table, a selection can readily be made from the most promising of those at hand, and the fish secured without difficulty.

WISDOM.

EVERY drop in the sea of life imagines itself an ocean.

If the young would remember that they may be old, and the old would remember that they have been young, the world would be much happier.

ADVICE which, like the spow, softly falls, dwells the longer upon and sinks the deeper into the mind.

It is better to be inconsistent with yourself, and change your opinion, than be inconsistent with truth by pertinaciously adhering to it.

It was a noble sentiment that Judge Talfourd died in uttering: "That which is wanted to hold together the bursting bonds of the different classes of this country, is not kindness but sympathy."

VIRTUE seems to be nothing more than a motion consonant to the system of things; were a planet to fly from its orbit, it would represent a vicious man.—*Shenstone*.

HAPPINESS is a perfume which one can not shed over another without a few drops falling on one's self. He that would make others happy must be happy himself.

"DURING my long commercial experience," says Girard, "I have noticed that no advantage results from telling one's business to others, except to create jealousy or competition when we are fortunate, and to gratify our enemies when otherwise."

He who through life in quietness would go,
Far from the noisy world his way will keep
Beside the streams in solitude that flow,
Contented with his little flock of sheep,
Nor seek in glory's paths her fading wreaths to reap.

MIRTH.

[Under this heading we propose to publish
"A little nonsense now and then;"
which
"Is relished by the wisest men."]

CURE for dyspeptics: Live on a dime a day, and earn it.

"I CAME near selling my boots the other day," said Jones to a friend. "How so?" "Well, I had them half-sold."

A HUDSON milkman was overheard singing to his fellow-craftsmen, "Yes, we'll gather at the river." He meant more than he said.

A CITY missionary was asked the cause of his poverty. "Principally," said he, with a twinkle of the eye, "because I have preached so much *without notes*."

If you want to talk heavy science, say "protoxyd of hydrogen," instead of ice. It sounds bigger, and not one man in a thousand will know what you mean.

"GOOD-MORNING, gentlemen," says a book-peddler, entering a railroad car. No one responded. "Beg pardon if I have said too much. I withdraw the last expression."

A MATRIMONIALY inclined cotemporary says that a girl with three thousand a year, or more, is always an object of interest, because she has so much principal.

"MR. Speaker," said a member of the Wisconsin Legislature, in discussing a bill for the regulation of the timber trade, "these timber dealers are a bad lot; they're egregious scoundrels. I know 'em; I was in the timber line myself more'n twelve years."

PUFFING and blowing are often considered as synonymous terms. You will discover a difference, however, if instead of puffing a man, you should blow him up.

A **LITTLE** ten-year-old miss told her mother the other day that she was never going to marry, but meant to be a widow, because widows dressed in such nice black, and always looked so happy.

A **BOOKBINDER** said to his wife at the wedding: "It seems that now we are bound together, two volumes in one, with clasps." "Yes," observed one of the guests, "one side highly ornamented Turkey morocco, and the other plain calf." That guest had presence of mind enough left to avoid sudden contact with a well-aimed patent leather boot.

"I **SHOULD** think it is time for you to settle that bill already due for three months," said Mr. Z. to Dr. S., as he handed over a bill to the latter. "Do you spell your name with a C or a Z?" asked the Dr. indignantly. "With a Z, to be sure." "I am really sorry for your misfortune," said the Dr.; "I have lately determined to pay up all my debts in alphabetical order." It is needless to say that Mr. Z. probably had to wait another three months for his money.

THE SKATER'S COMPLAINT.

BY E. H. ELLEWORTH.

ONCE a question grave I pondered,
And in consequence I squandered
Greenbacks, which I now deplore;

For, with solemn self-debating,
I decided to go skating;
And for skates did shops explore,
With an X I'll see no more.

Soon I strapped them on and started;
But the ice and my skates parted;
For the skates inclined to *rise*.
On my cranium I alighted,
And the *moons* and *stars* I sighted
Beat the ones up in the skice—
This was pleasure in disguise.

But, determined to discover
All its charms (or else recover
Damage for my X in bumps),
Still the slippery ice I trusted,
And quite oft reclined, disgusted,
Musing over sudden thumps;
But persistence still triumphs.

And when hard-won victory crowned me,
And my friends and neighbors found me
Gilding o'er the ice with ease,
Those who never were my cousins
Ooened me by tens and dozens,
Saying, "Lend me your skates, please,"
Dawned their *meaning* by degrees.

For I soon learned, to my sorrow,
This incessant lend and borrow
Summed up plainly, thus translates:
Leather worn and straps all "busted,"
Steel all broken, bent, and rusted,
Demoralized at shocking rates;
In a nutshell, *death to skates*.

ELGIN, ILL.

Our Mentorial Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of its early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage.

WHY THE HUSBAND SHOULD BE OLDER THAN THE WIFE.—In your January number you say that there are important reasons why in marriage the wife should not be older than her husband, which rather stumps and puzzles me. I have asked my married friends on the subject, and they say they can see no reason for it. Please clear this up to me, and also tell me if the husband is the elder how much older may he be. What is the limit he should not pass in difference of age?

Ans. It is supposed and believed by physiologists and close observers of human nature that a

girl is about as old at eighteen as a young man is at twenty-two. If this be the case, then there should be that difference in the age of young people when they marry. We do not say that it is best for men to live single until they are thirty-eight or forty, and then marry a girl of eighteen or twenty, because in that case a man becomes old and imbecile to some extent before his sons and daughters, especially the younger members of a large family, are established in life. A man who is seventy years of age is not well adapted to train a boy of seventeen, besides old men have lost their youthful buoyancy and forgotten that they have been boys, and are apt to repel all consideration of the games, sports, and pastimes of youth. We like to see a father of forty skating with his son of fifteen, or playing a game of ball, or rambling in the fields or forest in quest of game or nuts. We like to see the father and mother in social parties with their sons and daughters. If dancing is the rule, nothing is prettier than to see a father dancing with his sprightly daughter, or a happy mother

with her son. Moreover, a man that is very much older than his wife is not congenial to her as a companion; his tastes are staid and aged, while hers are elastic, buoyant, and joyous; but we have no objections to four or five years' difference in the ages of young married people. We would make just the difference that physiology does; some men, however, are as ripe at twenty-one as others at twenty-eight, some women are not fit to be married until they are twenty-five. Winter apples should not be eaten until they are ripe. The marriage of green youths may perhaps save them from some temptations, but the children of such young parents are apt to be callow, and not very strong in mental organization. A man who does not marry until he is thirty-five may marry a woman eight years his junior, for woman seems to grow old faster than man, and the difference is more apparent as they reach the ages of from forty to fifty. If there were no children to be brought up when the father becomes too old to have the care and proper management of them, the man might be several years older than the wife profitably, after he is forty years old and upward.

IS IT A SWINDLE?—*Editor of PHRENOLOGICAL JOURNAL:* Is the New York Medical University, Nos. 6 & 8 University Place, worthy of confidence, and will its medicines perform the cures claimed for them? Please answer in your next number of the JOURNAL, and oblige an inquirer.

Ans. It is simply one of the numerous one-horse medical quack concerns, conducted in an old private dwelling-house, with a horse stable for a laboratory, and that is called "The New York Medical University." A more barefaced fraud can not be found outside the Tammany Ring of pot-house politicians and other thieves. The name intentionally made so near that of "The Medical College of the University of the City of New York" deceives many; and its location in "University Place" makes the deception appear plausible. "Will their medicines cure?" They will relieve a patient of his greenbacks as effectually as any other keno or panel-house trap. Look out for the quacks.

DOUBLE MENTAL ACTION.—It has occurred to me as being remarkably strange that the mind or brain can perform one thing accurately and think of another foreign to it. For instance, I have been engaged on figures, have proved the same to be correct, and during its performance had been thinking of something not at all in harmony with it. Please give me your solution.

Ans. If the whole mind were a single faculty, and the whole brain a single organ, such a course of mental action would be impossible. Having many organs and faculties, we can understand principles, admire beauty, recall former facts, fear danger, hate iniquity, and honor justice at the same time through the simultaneous activity of the several faculties by which these thoughts, sentiments, recollections, and emotions are manifested. Reckoning figures requires the action of

one or two faculties; and "thinking of something not at all in harmony with it," is done by another set of faculties. You can see, hear, smell, taste, and feel at the same time separately. So different mental faculties can act.

I. J. K.—What climate would you recommend for bronchitis, nasal catarrh, and weak lungs?

Ans. That which is high, dry, and bracing. Why not try first the plains, and then the mountains of Colorado?

THE TURTLE—TENACITY OF LIFE.—A remarkable case of tenacity of life was observed by one of my neighbors a short time since. He discovered upon his place a headless mud-turtle, which showed signs of life; it excited his curiosity, so he resolved to take it home and see how long it would live in this state. He learned from a neighbor who had cut its head off how long it had been living in this manner, and then kept a record of the days, examining it daily. It continued to exhibit signs of life for one hundred days.

Ans. These animals do not live so much in the head as many others. The brain of a great sea turtle that weighs 600 pounds is not larger than a walnut; but the nervous ganglia are distributed in different parts of the system, and in these the power of life seems to be distributed. Man and most of the warm-blooded animals die instantly if the brain be seriously invaded, but the turtle will sometimes show signs of life when it has been dissected and cut up in pieces for twenty hours, and if the parts be touched they will cringe.

GRAY HAIR.—Why does hair turn gray? Does it depend on the blood?

Ans. It originates in some change in the condition of the system, which feeds and sustains the hair. Age produces this condition in some quicker than in others. Certain diseased conditions produce gray hair prematurely.

COLD HANDS—WARM HEART.—Why do people tell us when we have cold hands that it is "a sign of a warm heart?"

Ans. The prevailing sentiment of which this frequent utterance is an indication, although originally derived from sound physiological truth, is, indeed, a distortion or perversion of that truth. People when making the remark allude rather to an individual's character than to his physical state, and the person to whom such a remark is addressed draws a favorable inference, or flatters himself with the notion that although his hands are cold his disposition is cordial, genial, and hearty. The fact of the matter is simply that cold hands, whether this be a temporary condition or one that is natural to the person, indicate a defective circulation of the blood—in other words, that the vital current does not penetrate into the minute capillaries of the extremities with that vigor which is consistent with genuine health, but rather courses through the interior channels of the body. Persons suffering from a bilious condition are troubled more or less with cold extremities.

ties; the blood is stagnant, as it were, in their veins, and the inactive tissues of the surface suffer a deprivation of its vivifying influence.

WANTS TO BECOME A PHRENOLOGIST.

—Dear Sir: I am a farmer by trade, but don't like the business. Can make a good living, but what's that? I contemplate studying Phrenology, with a view of earning my bread and butter by its practice. I think I can succeed in that "arena." Am thirty years old, and have a common school education. What is your advice in the premises? Inclosed please find stamp.

My Dear Sir: Why spoil a good farmer to make a poor phrenologist? If you were disabled so that you could not labor, there would be a reasonable excuse for you to try something else, and if educated, so that you could teach, there would be no objection to your taking up Phrenology. Of quacks and pretenders we have too many. These owe out a precarious existence, falling into fortune-telling, astrology, or become "no cure no pay" quack doctors, and bring disgrace on the science and on themselves.

DARK POINTS.—1. If the brain is the seat of the mind, does it follow that food gives nutrition to the brain, and therefore food supports the mind. 2. Is it true in any case that men's skulls are thicker in some parts than in others, and that they extend farther in in some places than in others? 3. Sometimes we meet with persons whose heads are very large, well-formed, and the person may seem to be of good temperament, and yet is very ignorant and sometimes foolish. Now, what is the cause of this?

Ans. 1. Brain is not mind, but in the present life brain is the link which connects mind with matter. Whatever nourishes brain, therefore, sustains the manifestation of mind. 2. Skulls are usually of a pretty uniform thickness, but sometimes one portion of the skull becomes thicker than other parts in consequence of the inactivity of that part of the brain. We can usually determine the relative thickness of the skull or of different parts of the same by vibration when the subject speaks. 3. Heads may be large with a weak or a dull brain, and the mind will be dull accordingly. An expert phrenologist will generally detect all these cases, as well as an experienced horse-dealer will tell the speed and spirit of a horse by looking at him.

SMOKE.—The smoke (in this part of Kansas) as soon as cool, descends to the earth. In the coolest, clearest weather we have it is the same, and it rarely ever ascends. Is the air so much lighter than the smoke? Would you consider air so light good for weak lungs?

Ans. The smoke is heavier than the air, and the only reason why it rises is because the heat, which causes smoke, expands and rarifies the air containing it. Smoke will fall anywhere if it is not dissipated and mingled with the air by wind; and even then the fine particles of unconsumed combustible matter descend in the form of soot, but it is too much diffused to be noticed, just as a cloud of dust may be so distributed that we do not see

the particles of dust when they fall. Light mountain air is best for lungs, while that at a low altitude at the sea-side, and consequently heavier, is not so good.

WEIGHT OF BRAIN.—Does the development of the brain add to its weight?

Ans. Yes; a large brain weighs more than a small one of the same quality; and development of brain by active mental effort tends to give it compactness, and adds to its weight. A well-fed man will weigh more in proportion to his size than one who is poorly nourished. The same law will hold good in regard to brain or any other portion of the system.

WANTS TO GO TO CALIFORNIA.

—Here is an original proposition to "raise the wind." It comes from Green County, Pa., and is addressed to the editor:

I wish to take a trip to sanfrancisco California. In the spring, on these terms I am a poor man, but can give you good reference as to honesty in doing as I say I will. The plan I have in view is this I will agree to post up a good number of circulars in every railroad town between here & sanfrancisco possible the circulars to be of your own choosings of your business I wish you to furnish me with a free pass to the city of of sanfrancisco & back you paying all necessary expenses I feel satisfied it would remunerate you & me both I will charge nothing but my pass to & from the city home if you think it will pay you to hire me on these terms please let me know soon as convenient. [We omit names, as the letter was not intended for publication.]

"A CAST OF MY HEAD."—How can I obtain a cast of my head?

Ans. We have given, in the ANNUAL for 1872, full particulars as to how this may be done under the title "How to Take Plaster Casts."

THUNDER-FIRE.—Please explain the philosophy of thunder and lightning, and also of fire.

Ans. Thunder is produced by the concussion of the air from the rapid passage through it of the electric current. Lightning is electricity seeking an equilibrium, and the light is caused by the friction of the electricity on the air which heats it to a flame.

FIRE—Is heat, and may be produced by friction, and combustion is sustained by the combination or contact of carbon and oxygen.

GROWTH OF ORGANS.—Do the phrenological organs increase in size so as to be discernible by phrenological examinations at different periods?

Ans. Yes, if the subject be not too old when the first estimate is made. A man twenty-one years of age will increase almost any organ, or class of organs, if he have a vigorous body and exercise the organ in question for a number of years. If all the organs be equally exercised, the head will maintain the same shape, but will become an inch larger, for instance, in fifteen years.

"HEARTH AND HOME" inquires concerning the authorship of the oft-quoted line,

"Though lost to sight, to memory dear;"

and the JOURNAL takes the liberty to answer that careful investigation has failed to discover the author. One who has given considerable attention to the subject says, that, as far as he can ascertain, the stanza containing the line was found in an old memorandum book with no name attached. This stanza is as follows:

"Sweetheart, good-bye! the flitting sail
Is spread to waft me far from thee;
But soon before the fav'ring gale
My ship shall bound upon the sea.
Perchance, all desolate and forlorn,
These eyes shall miss thee many a year;
But unforgotten every charm,
Though lost to sight, to memory dear!

What They Say.

THE commencement of our new Health Monthly is everywhere received with an enthusiasm exceeding our most sanguine expectations. We subjoin a few extracts from the numerous responses already received:

"Shall you do it? I owe my life and present health to a chance number of the Health Journal you published nearly twenty years ago. As I was then, thousands are now. For their sake do it."—M. D. R.

"The world is literally drugged to death. These are the words of an eminent allopathic physician, now a professor in a medical college. If you can show a better way, why not?"—J. O. C.

"The hygienic system will be universally adopted as soon as it is universally understood. If you can hasten the 'good time coming,' I pray you will."—J. S.

"The world needs just such an independent Health Journal as you propose."—R. E. P.

"I rejoice in the prospect of a new Health Monthly that will be free of all private and local prejudices or interests, and a guide and instructor for the people. You have my best wishes, and shall have my *biggest claps* in due time."—E. L.

"I can work for the SCIENCE OF HEALTH with good heart and 'great expectations.'"—S. S. A.

"Your proposed SCIENCE OF HEALTH is certainly one of the things needful. Count on me for one hundred subscribers."—M. M. N.

"By all means do it. The abominable drug system has cursed the world too long already."—R. L.

"Yes, do it. The greatest want of humanity is a medical system which ignores all poisons."—J. P. T.

"I am sure that such a Health Journal as you can publish will be just what the people want; and the best in the world."—B. P.

"I am an allopathic physician, and am not yet convinced that drug medicines are not sometimes necessary. But I go for free discussion. If you can show that all medicines can be safely dispensed with, so much the better. Do it."—Y. D. S.

"Do it, of course. The world needs a Science of Health, or a SCIENCE OF LIFE, and you have right materials and co-workers."—C. P. P.

"I know you have the facilities for publishing the best Health Journal in the world. Do it."—D. M.

"I have been a successful canvasser for several years, and will take hold of your SCIENCE OF HEALTH with a will. Calculate on not less than one thousand subscribers from me during the year."—R. S. A.

[We could extend these congratulatory expressions, but close with the following.]

"HIGHTSTOWN, N. J., March 22, 1872.

"S. R. WELLS—Dear Sir: The PHRENOLOGICAL JOURNAL for April received this A.M. On opening, I found in the Publisher's Department these words, 'Shall we publish an independent journal of health?'

"I vote AYE! By all means let us have a good Health Journal. We can look forward to a monthly feast of good things, when we know the source from which it comes. (No flattery.) I would suggest to issue it same shape as the A. P. J., and then when volume after volume is bound, they can be placed on the shelves of the library. I remain, very respectfully, yours, R. M. E."

[The "votes" are not yet all in, but, so far, the voting has been all one way—not a dissenting voice has been heard. The die is cast; we are decided; a new JOURNAL is to be published. Fortunately he who reads and heeds its teachings. "Light, light, more light!" is what the people demand, and they shall have it in our new JOURNAL, THE SCIENCE OF HEALTH.]

PHRENOLOGY IN OREGON.—We give below extracts from a letter from a mother in Oregon seeking aid for the education of her sons through Phrenology. She says:

EDITOR PHRENOLOGICAL JOURNAL—Dear Sir: I am living in the mountains of Oregon with a family of boys, and as I am anxious to bring them up phrenologically, I have come to the conclusion to ask you to send me your JOURNAL for one year free. We are twenty-five miles from a post-office, and nearly as many from any kind of a school or church. We have settled here in order to get a homestead, and bring up our sons in the good old-fashioned way. I am compelled to be their teacher, and as they are just beginning to form habits for life, I think there is no better guide than the PHRENOLOGICAL JOURNAL. I formed the resolution years ago that no son of mine should use tobacco in any form or drink whisky, if there be any power to prevent in a mother's influence. I have five sons between the ages of two and fifteen, and my highest earthly ambition is to make them good and useful citizens of the Republic of the

U. S. [Amen.] But for the present our means are so limited that we can procure only the bare necessities of life. Now, if you conclude to send the JOURNAL, I will do all I can to increase its circulation here in this benighted part of "Uncle Sam's" domains. I have been a reader of nearly all your books that were published twenty-five years ago, and am a firm believer in the principles taught by them; but for some years past have had no chance to get them. If I had the means, I would place a copy of the JOURNAL in every family in Oregon. I am ashamed to ask for the JOURNAL on such terms, but am in hopes to get my two oldest boys interested enough to try and become life subscribers for it. Respectfully yours.

[This is all very encouraging for U. S., and, under the circumstances, we propose to invest to the extent of a year's subscription, counting it as "bread cast upon the waters." *We ought to have a charity fund on which to draw in such cases.* And, just here, a word for Oregon. We regard the future of that beautiful State as most promising. It is high enough, dry enough, fruitful, healthful, and rich in timber, soil, water-power; is good for grass, grain, fruits, flowers, and must soon become in all respects a charming country in which to summer and to winter. We believe in Oregon as well as in California and Washington Territory.

TEST OF PHRENOLOGY.—The following from a correspondent, Mr. S. Shaffer, illustrates the truth of Phrenology, and its utility in classifying criminals and in judging character generally:

"ED. PHREN. JOUR.—Phrenology was brought to rather a severe test a short time ago. Mr. Barrett, a phrenologist, living near this place, while in a neighboring city was invited to enter the prison and examine the heads of the criminals. There were confined at the time men charged with murder, counterfeiting, theft, etc. He carefully examined all the heads before him and readily told for what crime they had been imprisoned, until he came to the last person, and here he appeared to be puzzled. He measured and examined the head thoroughly in silence. Finally he exclaimed, "This man has no business here—he must have been sent here through perjury." It turned out that the keeper, in order to test the matter, had induced one of the most respectable, upright, and worthy men of the place to be confined with the criminals, and be dressed in such a way as to appear like a culprit."

This circumstance reminds us of a similar test which some ingenious citizens of Buffalo, N. Y., some thirty years ago, prepared for Phrenology and its advocate, Mr. Sims. A party was made up to visit the jail, and Mr. Sims was invited to examine and describe ten or a dozen of the jail-birds who were awaiting trial or serving out their sentences. He was successful in pointing out the crime for which each was committed. In one instance he said his subject would not be likely to commit any low mean and little rascality, nor perpetrate any low and vulgar crime. He was more likely to commit forgery on a large scale than to steal, rob, or mur-

der. This proved to be the celebrated Benjamin Rathbun, who was then regarded as the most enterprising business man of Buffalo, a kind of Vanderbilt for the breadth and efficiency of his operations.

This description by the phrenologist of the smartest and most respected citizen of the town soon spread, and an excited crowd visited the hotel, determined to tar and feather the phrenologist, or in some other gentlemanly manner evince their disbelief in a science which thus could vilify their best and most useful citizen; and the peace-loving landlord begged Mr. Sims to leave his house by a private back door and take refuge on a steamboat bound for Detroit, promising to forward his baggage as soon as he could. Thus Phrenology was disgraced, and one of its humble advocates avoided maltreatment at the hands of a discriminating public.

Sequel. A few months afterward Rathbun was arrested for forgery and sentenced to hard labor for ten years in the State's prison at Auburn, and it was ascertained that at the very time when he was disguised in rough clothes in the Buffalo jail, and being examined by the phrenologist, he had in the banks \$200,000 worth of forged paper on which he had drawn the cash. His plan was to draw notes and forge the indorser's name, and before the paper became due he would issue another batch to pay up the old notes, and thus for years he had raised money for building blocks of houses and doing other public-spirited things.

Sequel No. 2. After Rathbun had been thus disposed of, the good people of Buffalo, so ready to vindicate their great business man at the expense of the phrenologist, sent a cordial invitation to Mr. Sims to return and give a course of lectures.

THE SPACE MARKED *.—I notice in the symbolical head that there is an unknown organ located just forward of Alimentiveness. This organ is full in my head, and is frequently exercised so as to produce a feeling of pain. I have been making some observations upon it, noticing the condition of mind which produces the excitement of the organ in myself, and also in some of my acquaintances. From these observations I think the organ should be named Repulsiveness. I have noticed that it is most strongly excited when exercising a strong feeling of repulsion toward some object. When the organ is improperly exercised it will at times produce sullenness, causing the person to refuse to eat, talk, or do anything but exercise a feeling of repulsion toward everything. Whenever any other organ is strongly exerted so as to produce pain, this organ becomes excited also, and by producing a feeling of repulsion, endeavors to relieve the overtaxed organ. This is especially true of those organs near it. There is nothing that we repel more quickly and decidedly than what is disagreeable to Alimentiveness. N. M. B.

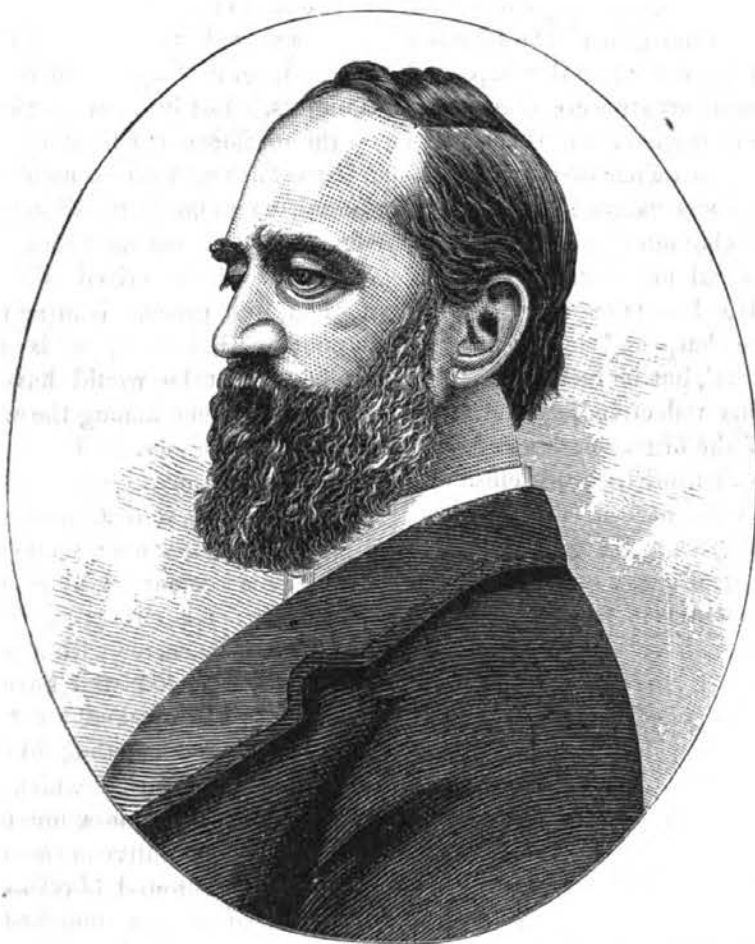
Ans. The matter is open to observation. One man thinks it controls the breathing or respiratory power, and gives an appetite for air; another, that it presides over the function of sleep. Mere guessing, however, won't answer to found a scientific claim. Ask of anatomy. Wait.

THE PHRENOLOGICAL JOURNAL AND LIFE ILLUSTRATED.

VOL. LIV.—No. 6.]

June, 1872.

[WHOLE No. 401.]



WILLIAM ORTON,

PRESIDENT OF THE WESTERN UNION TELEGRAPH COMPANY.

THE observer at once exclaims on beholding this portrait, deficient as it may be in comparison with the original, "What a fine head!" If we briefly analyze it we find many qualities which go to make up a fine character. In the

first place, we are impressed with the superior tone which the whole organization evinces. There is in it what we confess to be the true aristocracy of blood, a highly ordered temperament, coördinating with and in harmonious relation to the refinement of the organization. There is a sharpness of outline, and yet a symmetry of mold, and a softness of finish, too, in those features. The forehead is cast after the classic pattern, but towers higher than that of the Grecian hero, indicating less muscular capacity than the ancient artists were pleased to chisel on the countenances of their favorite studies. The owner of such a forehead must possess unusual ability as a discernor of character in men, and a close and critical judgment of practical questions. He has enough perceptive intellect to be sharp and scrutinizing in matters material, but he inclines more to the use of his reflective intellect. In the sphere of the organizer his capacity is best illustrated, for there his close discrimination, keen insight, ready invention, and comprehensive judgment are brought into exercise. Few men have so much native tact in the appreciation of conditions, and so much inspiration in the discovery and use of methods which can be applied to the resolution of difficulties.

He has a positive repugnance to superficiality; and in his management of affairs exhibits remarkable tact in designating and appointing the capable and responsible to positions which require thoroughness of understanding and skill. Few men comprehend character better than Mr. Orton.

He has much pride of character, but it is founded on a delicate sense of personal integrity and that consciousness of worth which is the result of successful contact with the world, rather than on a large development of Self-Esteem. He is not the man to court notice but rather

avoids it, preferring to conduct affairs, however important, apart from the world. His faculties work more freely in the seclusion of a private office where no discordant interests may be forced upon his notice. He has prudence enough to guard against the occurrence of annoying contingencies; his plans usually cover the field of operation, and plant defensive works at the weakest outposts.

The sign of Language is large, and he possesses more than average ability in giving utterance by tongue or pen to his thoughts. But it is not in the forum or on the platform that he would evince his talents for speaking so much as in the committee room or the directors' chamber, before a few auditors. His language is characterized by precision, method, and grace. Had he chosen the pursuit of literature, it is altogether probable that he would have attained an eminent place among the writers and thinkers of the day.

His temperament contributes much of sprightliness as well as acuteness to his intellect and manner; while he is no trifler, he is not parsimonious of his time and efforts. His strong Benevolence impresses his character with a warm sympathy for his kind, and an earnest desire to help the oppressed and cheer the sad. There is, we judge, a vein of sadness in his disposition which does not contribute to moodiness, but rather renders him contemplative of the interior life of the world around him, and gives a deep tone to his own thought-life.

For our portrait and the subject matter of the sketch which follows, we are indebted to the *Journal of the Telegraph*.

Mr. Orton was born in Cuba, Alleghany County, N. Y., on the 14th of June, 1826. His advantages for education were few, but like most other men who have taken conspicuous place on the world's register, he was chiefly his own instructor, and consequently selected those studies which seemed best adapted to aid in working out those

practical issues which presented themselves in the course of his career; and to such studies he devoted himself with all that energy inspired by the feeling of necessity. To persistent toil, directed by a sound judgment, Mr. Orton is indebted for his success, rather than to any special talent, or what the world usually denominates genius. It is somewhat significant, as a prophecy of the direction which Mr. Orton early pursued in mental and manly effort, that his first thesis was on the magnetic telegraph, and was illustrated by a model constructed by his own hand. From the year 1845 to the commencement of the late war, Mr. Orton was connected with the book trade, and during the latter part of such connection was a member of a prominent firm in the city of New York.

In 1862 he was appointed Collector of Internal Revenue for the Sixth District of the city of New York. His administration of the duties of this important office proved him to be a man of superior practical judgment, of comprehensive understanding of the principles embraced in those duties, and of vigor and efficiency unusual with those who occupy public positions. In fact, so marked was his capacity for the peculiar services of this office, that the attention of the Washington Government was called to him, and in 1865 he was appointed Commissioner of Internal Revenue at Washington. How he conducted this very important department of national affairs is clearly seen in the following letter of the Secretary of the Treasury, written on the retirement of Mr. Orton from public service:

TREASURY DEPARTMENT, *October 26, 1865.*

MY DEAR SIR: Your favor of the 25th instant is received. I regret exceedingly the necessity that compels you to resign the very important office of Commissioner of Internal Revenue, the duties of which you have discharged with so marked success. Our official intercourse has been short, but it has been exceedingly pleasant to me, and has been long enough to satisfy me of your great executive ability, your uprightness of character, and your devotion to the Government. I can pay you no higher compliment than to say you have filled one of the most laborious, trying, and responsible positions in the country, a position requiring great patience, industry, promptness of decision, and nice discrimination, and a thorough acquaintance with the law, in a manner highly satisfactory to the country and the Secretary. Anticipating for you an honorable career in whatsoever business you may engage, and with thanks for the support you have given me in the administration of this great Department, I am, very truly, yours,

H. McCULLOCK, Secretary.

Mr. Orton retired from the commissionership to enter upon the execution of a trust scarcely less important, to wit: the Presidency of the United States Telegraph Company, which had been unanimously tendered him by the Board of Directors.

He found the affairs of the Company in a critical condition, and after a careful examination was convinced that nothing but the most vigorous measures would rescue it from failure. An attempt at economy accomplished something to arrest the accumulating loss. But it soon became evident that new appliances must be used, the line pushed through rapidly to the Pacific, and new capital be enlisted to a large extent to give any hope of final success. And there were men of large means who seemed willing to make the experiment. But other counsels prevailed. It then became more and more evident that neither the Western Union Telegraph Company nor the United States could bear the depleting opposition of one another. After much negotiation, in which the imminent risk the Companies incurred by continuing in the old course was the most cogent argument, their interests were united. In the new organization which resulted, Mr. Orton was chosen Vice-President, and not long afterward, in 1867, he was unanimously elected President of the Western Union Telegraph Company. The complex duties of this position he still performs, and in various ways exerts an influence in telegraph affairs probably paramount to that of any other man in the country.

To be sure, it may be said that in connecting himself with the telegraph management, Mr. Orton had the advantage of coming in fresh from the contact with the public men of the nation, with an extended knowledge of outside public sentiment, and freed from the bias of seeking personal advantage and emolument; but it should also be said that with these qualifications he possessed that executive ability which could apply his past experiences and information to the issues which his new sphere presented. His broad intellect discerned the needs of the country in the line of the important interest he had undertaken to promote. He appreciated the value of the telegraph to the world, and determined to aid vigorously its development.

The years which have passed since he assumed the executive relation have witnessed an astonishing growth in telegraph affairs throughout the world, and especially in America, where this system of transmitting

intelligence was first made practicable, and one can scarcely attempt to predict what the future of this potent agent of civilization will be under the wise administration of men like Mr. William Orton.

REFORMATORIES FOR JUVENILE OFFENDERS.

SEVERAL of the States have now in successful operation REFORMATORIES, which serve at once several useful purposes. Among these the following may be named:

1. They are places of *restraint* for those who had not been taught self-control.

2. They are *Industrial* work-shops, in which useful trades may be learned, by which an honest living may afterward be earned.

3. They are *Asylums*, where proper care may be taken of the morally and physically infirm. Here, as elsewhere, sickness comes to the victim, and right treatment should be administered.

4. They are *Schools*, in which education may be afforded for the future good of the culprit and the State. It is the part of wisdom and common sense for those in authority to provide the means of securing good citizenship for all their inhabitants. We do not know of any more important Home missionary work than this. Let each State establish a REFORMATORY, to be conducted as those in Massachusetts and Indiana are. Do this, and crime will be sensibly diminished, and society will thereby obtain a guarantee for good citizenship on the part of many who would otherwise become only pests, vagabonds, and criminals in community. Here are some very sensible remarks from the *Missouri Republican* of recent date, which we commend to our legislators:

Of the many excellent recommendations in the recent message of Governor Brown, that one which proposes the establishment of a State Industrial Reform School deserves special consideration. We are glad to see that it is already attracting the attention of the General Assembly. Something ought to be done, and that immediately, to relieve the State penitentiary of "that recruitment of crime from the ranks of juvenile offenders" of which the Governor so justly complains. If the design of the penitentiary was not

only to secure employment for the muscles and minds of the convicts, but also a reform of their morals, it can not be regarded as a very eminent success. His Excellency is certainly right in his conclusion, "that it should be reserved as far as practicable for what are termed hardened criminals, as evidenced by repeated or violent types of crime, and not made a receptacle for novitiates in vice." Youthful offenders, sentenced for the first offense, are corrupted and utterly ruined by the adroit, hardened villains with whom they are here brought in contact. Every feeling of penitence or humiliation is destroyed by these associations; the juvenile offender is ridiculed for his greenness, taught that society is his enemy, laughed out of his ideas of reformation, and instructed in arts of villainy and ways of crime of which he had not previously formed any conception. The message says:

"Strenuous effort has been made at classification under the present management, and especial attention has been given to separation of the young from contact with more matured criminals. But the difficulty in such promiscuous assemblage with such insufficient appliances, has been very great, and silence during hours of work, together with assignment to separate cells at night, seems to be the only practical measures yet reached."

The great business of society is the prevention and not the punishment of crime. The community ought to consider the impressive facts, that only a small number of the 875 convicts in the penitentiary had any mechanical trades when convicted, or any sufficient means of obtaining a livelihood, and that, as Governor Brown states, there are now 386 convicts undergoing sentence of two years for grand larceny, and the value of property alleged to be taken will not average twenty dollars each. It is for such offenses as these that the State brands erring youth, without trades, without culture, and

often without friends, with irretrievable dishonor. And yet we call this a Christian civilization! Can any one doubt the wisdom of the conclusion reached by our executive that "the beginnings of crime and minor grades of offense should be treated more leniently, and the lesson of labor inculcated by some teaching short of absolute disgrace."

The Governor recommends that the statute be so amended that the valuation constituting grand larceny shall be raised from ten dollars to twenty-five dollars. A still better recommendation is, that the convict be required to earn, by effective industry, and return to the wronged party the amount of which he has been deprived. To utilize the labor of the criminal and to control the fruits of his industry, till he shall have made complete restitution to the party aggrieved, is certainly a much more just and beneficent policy than to inflict upon him lasting dishonor, destroy his self-respect, break down his manhood, and convert him into a perpetual marauder upon society. It is emphatically true, that "in criminal matters, as in all other social appliances, property is but too apt to assert an undue elevation above labor, and forget that theft and conversion of another's possessions do not differ very widely from obtaining another's labor with intent to evade a payment. Yet the punishments are widely different." The tempted, destitute youth, who commits a vulgar theft, is sent without mercy, without hope of reformation, to the society of ripened scoundrels, and doomed to be a vagabond and an outlaw, almost certainly, ever after; but the kindred villainy of a commercial or a professional thief who has taken his neighbor's property without rendering any equivalent, but who is able to keep out of the meshes of the law, is honored for his smartness, and perhaps sent to Congress. The principle which ought to apply in every case is unquestionably this: that whoever takes his fellow's possessions without rendering an equivalent shall make complete restitution; and it is the duty of society to exert its power to enforce such restitution. "Abandon the revenges of society," exclaims Governor Brown in golden words, "and teach its industries." This is the language of a philosopher and a statesman, and it will com-

mend itself equally to the philanthropist and the Christian.

The establishment of a reformatory would relieve the penitentiary, and not only save the youthful convicts, but render possible something like adequate reformatory discipline and instruction for the proper inmates of the State prison.

The great need, then, is a State Reformatory, which shall be a prison, a school of industry, an asylum, a house of refuge for tempted youth, and a genuine home for the friendless, but which shall be known simply as the State Reformatory. All its inmates should be taught useful trades, taught to read and write, taught to respect the claims of society and of the great Supreme, and dismissed at the end of their period of confinement, not dishonored, not corrupted by the vilest associations, not feeling that manhood and the future have been hopelessly bankrupted, but competent to earn a livelihood, redeemed from ignorance, instructed in morality, and prepared to be good and useful citizens.

The law should provide that those guilty of criminal offenses, such as are usually punished by imprisonment, should be sentenced to the reformatory and not to the penitentiary, provided that the offender is less than twenty-one years of age, and that it is his first offense, or marked by some circumstance of special alleviation. At all events, no convict should be sent to the penitentiary who is a minor, especially if he be now for the first instance charged with criminality. It is time that the barbarism of sending boys, for a grand larceny theft of ten dollars, to the State prison, to be confined in a cell, perhaps with a murderer, was stopped, or that we should abrogate our claim to be a civilized and Christian people.

Governor Brown has done his duty in this matter, and deserves the commendation of every wise and philanthropic citizen. His positions and recommendations are entirely in harmony with the views and conclusions of those who, in the different States, have devoted the largest measure of attention to the subject of reforming and punishing criminals. We trust the Legislature will give due attention to the suggestions of the chief magistrate. Let us have at least a commis-

sion of competent and beneficent men to examine into this subject in all its bearings, and report at the next session of the general assembly. Let all this be done, and then se-

lect competent men to manage, instruct, and direct these institutions—men who understand Phrenology, and, our word for it, great good will grow out of such efforts.

WHAT IS THE TARIFF QUESTION?

I. **A**LL civilized nations assess and collect duties or taxes on articles produced elsewhere, and brought or sent into their ports or frontier cities, for sale and consumption. None are seriously considering the policy of abolishing and dispensing with those duties. *Tariff* (from *Tarifa*, an African fort opposite the coast of Spain, where such duties are said to have been first imposed and collected) is the name given to the duties thus imposed by any state or government when regarded collectively. Since no nation, and no considerable party in any nation, proposes the abolition and disuse of all tariffs, we may fairly regard such repeal as out of the question. We have had very zealous and ultra Free-Traders in Congress from time to time, yet no proposal that duties on imports be entirely dispensed with was ever made and seconded in either branch of our Congress.

II. Nor has it ever been gravely urged in either that everything imported or introduced from abroad shall pay one uniform rate of duty. Even Mr. Adams never demanded this. Low duties for revenue only, was the extent of his demand; but he never proposed a horizontal tariff with no free list. The Free-Traders of to-day petition Congress to make salt, coal, wool, and pig-iron free.

III. Since, then, the necessity of a tariff, and of a discriminating tariff, is universally conceded, the practical question is seen to be this: *In what manner, to what end, should such discriminations be made?*

He who answers, "With a view to revenue alone," is distinguished as a Free-Trader; while he who responds, "With a view to protection," is known as a Protectionist.

IV. Let us fix and proclaim exactly what we mean by Protection:

Our country grows grain extensively, bounteously—grows much of it as cheaply as any people on earth can grow the like. Many wares which we began to make for ourselves at an early day, and have continued to make

abundantly ever since, under the stimulus of a large, constant, ever-increasing demand, we likewise produce cheaply, and of excellent quality. Axes, adzes, augurs, spades, etc., with most farm implements, are included in this category. Some of these we largely export, and though iron and steel are dearer with us than in Western Europe, all of them are probably as cheap in the average in this country as in Europe. In behalf of these protection is rarely invoked, and does not seem needed. But most textile fabrics—cloths, sheetings, prints (calicoes), flannels, carpets, etc., etc., are usually dearer here than in Western Europe—our labor being better paid, and our machinery and products, in the average, less perfect than those of Great Britain, France, Germany, Austria, and Switzerland. In the absence of a tariff on our side, the products of European looms would tend constantly to crowd those of our own looms out of our own markets, and stop the wheels of our factories. Protection is designed to sustain our manufactories, and keep their wheels running in spite of the advantages enjoyed by their foreign competitors.

V. Protection, by assuring to our manufacturing industry the home market (or, at least, a large share of it), often cheapens the articles protected. The maker of silk ribbons can afford to sell them cheaper when he has a large exhaustive market for \$1,000,000 worth for one season than he could when he could with difficulty sell \$100,000 worth, and that by fits and starts. Not philanthropy, but self-interest prompts him to sell cheaply when ten cents profit on each hundred yards made gives him a bounteous reward, where a cent per yard may have been too little when his product was necessarily limited by his narrow, restricted market.

VI. Protection does not preclude competition. On the contrary, it incites it. If the factory or furnace makes a large profit for its owners, that fact impels others to seek like good fortune. Fix the duty on pig-iron, for

instance, at \$100 per ton, and make our people reasonably sure of its staying there, and you impel many to erect new furnaces, and increase the aggregate product of pig-iron. This process will go on, with increasing momentum, until the profit of making pig-iron is reduced to an equation with the profits of other pursuits, if not (for a time) still lower. Of all misleading cries, that of "monopoly" against those who seek to multiply and diversify our manufacturing establishments is most unfounded and misleading. We seek to double and treble the number of our furnaces—is *that* monopoly? We entreat you who say that iron-smelting is now too profitable, to go in and make it less so. We are stigmatized as the champions of scarcity, the foes of abundance; but that is not true. The extraction of sugar from beets—a slow, difficult process—gradually ripened under the influence of Protection, as it could not have been without, has made sugar cheaper and more abundant throughout continental Europe; her laboring classes consume four-fold more of this universal luxury than they did or could do before Protection had made it a product of their respective countries.

VII. If I were to define Protection in a sentence, I should call it *National coöperation to preclude needless conveyance of staples or wares across oceans and continents*. So long as the wares needed in Iowa shall be brought from England or Germany, and paid for with grain or meat sent from Iowa to Europe, this consequence is inevitable: the grain-grower and the manufacturer must give a large portion of their respective products to pay for their reciprocal transmission. The British ax-worker receives far less grain or meat for an ax than an Iowa farmer pays for it, transportation and other inevitable charges eating up a large share of the food and wares thus exchanged. Bring the iron-makers and iron-workers to Pittsburgh or Cleveland, and they will obtain more food for their wares, while the farmers will receive more wares for their food; make the wares at Chicago, Rock Island, Davenport, and Des Moines, and the mutual advantage will be still greater. As the cost of exchanging their products is diminished, the recompense of the producers is increased. This is what I seek by Protection; and herein is Protection justified.

NEW YORK, April 2, 1872.

HORACE GREELEY.

Department of Our Social Relations.

Domestic happiness, thou only billes
Of paradise that has survived the fall!
Thou art the nurse of virtue.

STEAL OR STARVE.

WHILE we sit upon the rocky beach watching the tides of the great sea of Life, as they come and go, bringing something of the new and taking away the old, there is ever a tone of triumph uppermost that reaches the ear half listening for it; and many are they who watch, wait, and listen for some new song of an old hope; and happy are they who have become familiar with the triumphant harmonies of strength, joyousness, and love; but is there not a time that cometh unto every one when the ear hath found a quicker hearing, a greater delicacy of perception; when the loud voice of the surging waves is forgotten, unheeded, and the low undertones of a deeper-hidden

nature breathe their strange, delicate notes into the susceptible ear, from whence they are silently and quickly conveyed to the perceptive intelligence of the brain, creating wonder, surprise, and profound astonishment? Is there not a day, an hour, or the flash of a second, when some new, unthought-of revelation is made unto us, whereby all things and all thoughts seem transformed, and we henceforth see life in a new light?

We walk upon the earth performing our little duties or in procrastination dreading their performance, wishing they were self-executive,—wide-awake, as we suppose,—but dreaming, dreaming away the time, the opportunity, and the life, precious above price,

until some providence bursts upon us so unexpectedly and so specially, that, electrified, we are forced to awake, forced to look around us for the cause of our physical or mental commotion; and looking for the cause of a mysterious event, we look deeper, more searchingly into the crannies, seams, and interstices of things and conditions long familiar; but now, under scrutinizing eyes, revealing new phases; and we say, "It is not as it used to be." Are the changes of time so rapid and great as we suppose, or do we reach the true conclusion when we say, "Things are not as they seem?" The question answers itself; for when we find a thing to be entirely different from what it has appeared, there has been a quick, complete revolution. There is, however, a ready excuse for the question; because in the practical of life, the questions we ask of our reason are answered fractionally; we have to remember all the successive numerators and denominators as they are furnished. Then we must reduce the compound fractions of our experiences to simple fractions; and all to a straightforward, conclusive number for an entire answer. We know things are not the exact, identical things of our estimation or judgment, because we are so often ignorant of the simple duties of life and conditions pertaining to it; or being ourselves comparatively learned, we are constantly beset with questions and appeals, or with the sly artifices of the ignorant; we are forced to avow that the circumstances, characters, creeds, etc., are not what they seem.

Hear the joyous ring of the triumphant words, "We are a progressive people;" "This is the great age of progress," proclaimed everywhere with the forcibleness that makes faith and trust irresistible in their meaning; but the weary, care-worn faces, the hesitating, uncertain pressure of the foot to the earth, the smile that quickly merges into a somber cloud, the light laugh that is lost in the murmur of a sigh, these are but a few of the many evidences of an under and side current in the stream that, for some good reason, refuses to keep time with the middle waters.

Let those of our people who now, by personal effort or by inherited circumstances, find themselves sailing gaily in mid-current,

protected from the coarser elementary friction of the lower departments of life, let these people take a little thought aside from their own individual existence and give heed to the cause of their unobstructed passage to life Elysian. On every side, wherever and whomsoever we are, are young men and women who have desired and *dared* to go out from their homes to do, to labor, to battle for self-dependence; they have taken the responsibilities with many brave hopes and a few misgivings, with little knowledge of the actual before them, but with elaborate conceptions of innocent, unprejudiced imaginations; and what a fearful onslaught upon their noble purposes; what a cruel demolition of their beautiful castles is continually going on in the presence of those who wish and believe themselves to be philanthropists. We can sing a jubilant song, and shout "eternal progression" to encourage the young aspirants as they climb the rugged mountains of human greatness, and a good work is begun; but could we let our enthusiasm subside sufficiently to listen to their responses, we should hear new passages from a new book of Revelations, wherein are miracles matter-of-fact enough to sink or resurrect a nation in an incredible short space of time. The constitution framed for the government of a people, whereby they should worship God and do His work according to the dictates of individual conscience was a sublime conception of right; but when laws are so miserably executed as to cause the people, in masses, to pause in doubt and almost breathless despair, whispering to themselves, "Must I steal or starve?" as individuals, we are solemnly bound to find the source of influences that are spreading such miasma throughout the nation, carrying destruction to all that is worthy of humanity. When we find persons so indolent as never to care how or by whom they live, we need not fear for them as men and women; they have very little of the human element in their natures, and instinct provides for them; but he who can ask the question, "Shall I steal or starve," is decidedly capable of filling a nobler station—he is surely fettered by false education or by some oppression caused by outside influences; and we, individually, are responsible for the besetting temptations,

for his enslavement to or deliverance from them.

Not when victory has crowned our efforts are we heroes and heroines, but when defeat casts us down only to make us rise again with a new determination and a nobler purpose; when the black clouds of envy and malice mutter threats of revenge; when the searching winds of suspicion creep and coil around us and we can not shrink away from them; when true friends bid us a last farewell on earth; when the tried are proven treacherous; when we are houseless and hungry, and can still look up, trusting the hand that holdeth the day and night, the sunshine and midnight darkness, trusting the virtue of our own intelligence, then, and only then, are we heroes and heroines; are we worthy of the sympathies that love to praise and exalt our worthiness, making fame and worldly honor for our future years. Labor, under the direction of intelligent brains, is the only productive means of wealth; there is wealth dormant in the mountain, plain, and valley; wealth in everything; but Mohammed has the intellect to guide his hands in bringing the mountain to his feet. He can not pray it there; he can not command it there; he must *move* it with hands and machinery; and if wealth is honorable, the means employed thereto are emphatically honorable. If, on the one side, wealth is honorable and poverty a curse; if "honesty is the best policy," and craft a misfortune; if, on the other side, the strength and honor of our government lie in the hands of the people, we must take the trouble to learn the character of that people, its needs, its tendencies; and so fashion our influential powers that their imitation in the common walks of life will not endanger its welfare.

When fifty dollars income supports one family a year, and fifty thousand dollars are too little for the expenditures of another family, we have a right to cry out against the moral influences of aristocracy. Some one in the neighborhood of the man who consumes fifty thousand dollars thinks himself wise because he manages to spend only twenty thousand; and the working classes, looking to these, are apt to think themselves good financiers if they live just within the salary they command, let it be little or much. When

men of means and fancied honor find employes among those who, by begging or stealing, contrive to give a few months or years to apprenticeship, when they turn honest, intelligent faces from their farms, workshops, sales-rooms, and counting-houses, unwilling to compensate them according to their usefulness, compelling them to work for half the cost of board because they have not yet had opportunity to prove ability—needing their help, but determined to take advantage of unproved talents, then arises the question, "Shall I steal or starve?"

And justice justifies any man in stealing when there is only the alternative of starving. We may say there are few so closely driven to the wall—it is not fact; we are now a nation of thieves; we steal influence, reputation, money, and human hearts, but we never steal merit or honor so as to make them our own; they become intangible when plucked from the mother tree; they vanish from dishonest hands, and, like disembodied spirits, seek their natural sphere. We may fancy we see a real antagonism between the interests of capital and labor; but it is absurd for capital to entertain jealousy when itself is forever self-protective, and poverty forever powerless. We know how closely the common laborer is allied to poverty; when the physical organism refuses to do the work, the wages cease, and support comes through what we call charity. Those at the bottom of the ladder are very liable to remain there, unless they obtain assistance from some one above them. We may talk of self-made men, but self-made men have had some appreciative, helping hand to save them from that *one destructive pitfall*. Undeveloped genius, even of the highest order, becomes too expensive in development to make it auxiliary to the common imperative demands of the man; the mental or the physical becomes impaired in supporting its acknowledged superior. There are few brave enough to battle with so formidable a foe as starvation, even for the sure development of a great genius; the pains of hunger are too close at hand to be more than momentarily forgotten, even while imagination anticipates a future for genius as beautiful and brilliant as it could picture. The poor and the young need encouragement; and we are only true

to ourselves when we have offered assistance to those who are trying to climb the heights of manhood and womanhood. It is not soon enough to aid them when they have struggled through defeat after defeat, and laid themselves down in despair to die, or sunk their honor beyond hope of regaining it; they must be protected in healthfulness of both mind and body; and whosoever has a home wherein he can spend his days, so

choosing, has something still to do to protect it; he must help his neighbor to live so that he will neither steal nor starve. It is not money direct from the capitalist—from the purse of charity; but work must be had, and a fair compensation must be given for it—food, shelter, and raiment must be had, or we are sure to become a nation of criminals. Here is room for veritable charity.

ROSINE KNIGHT.

BEAUTIFUL FOREVER.

BY HOWARD GLYNDON.

SHE is not very fair, and yet
She has a winning face;
She wears not Beauty's coronet,
But there's a gentle grace
Upon her brow, and in her eyes
A light which could not be
If her thoughts were not sweet harmonies—
She's beautiful to me!

Not beautiful, save when the flush
Of feeling dyes her cheek;
When her lips are mute beneath its gush,
And leave her eyes to speak!
Not beautiful, save when some thought
Of goodness sends its glow
Across the face, by art untaught,
And yet, I love her so!

Aye! she is beautiful! though small
The gifts that overlie
The spirit, glorious in all
The things that can not die!
As leaves are to the reddening rose,
Her frame is to her soul;
They only swathe the grace that grows,
And shield the ripening whole!

The heart! the heart! give me the heart!
I care not for the face,
However fair each separate part,
Without the Spirit's grace.
Give me the heart! I care not how
The form may molded be,
If perfect love light up the brow,
'Tis beautiful to me!

Oh, ye who spend your precious days
In vain attempts to glid
With Arts' deceit each fading face,
If but your souls were filled
With love and beauty, know ye not
Their radiance would appear
Upon each forehead shining out,
More bright from year to year?

And when the vestments of the clay,
Should shrivel, fade, and fall,
Ye would not fear that perfect day,
Which shines at last on all;
Knowing this beauty of the earth
Is but a folded flower,
Which needs the chrism of higher birth
To bring its perfect hour!

SIR FRANCIS CROSSLEY, M.P.

THERE is great vitality and vigor indicated in this countenance. There is also energy and activity. That broad head, with the pointed nose and piercing eye, means push. That high forehead, with the large perceptive faculties and large Constructiveness, means originating, and planning, and inventive talent, with practical common sense. Sir Francis Crossley evidently possessed large Ideality, the faculty which gives taste and love for the beautiful; while his large Benevolence ministered to charity and generosity, and, with his strong social affection, to hospitality. There was also a well-developed top-head, showing strong religious tendencies. He was naturally devotional, hopeful, trusting, honest, honorable, dignified, a good citizen, and a Christian

gentleman. The sketch which follows is of interest as descriptive of the Crossley family, and the origin of that great carpet factory which for years has had a world-wide reputation, and of which Sir Francis was the most distinguished proprietor:

In the early part of the present century a young married couple belonging to the English working classes, the husband being by trade a carpet-weaver, took possession of a small mill, with a little dwelling-house attached to it, which they considered themselves fortunate in renting. It was to them a step in the way of progress, arduous toil having been their chief inheritance. The wife possessed a very industrious nature and an independent character. Early in life she had left

the home of her father, a small farmer, and had gone into the service of a family, also farmers, and there remained fourteen years, receiving but thirty dollars a year as her wages. Her part in this household was no easy one; for she milked the cows, churned the butter, and

"leisure" time. Out of her scanty wages and the profits of the spinning the young woman contrived to save a "nice sum," as one of her sons has said. When she left her place it was to marry. John Crossley, the journeyman weaver, was not thought a suitable match by



took it to market, besides attending to numerous other duties incidental to English rustic life. Doubtless she was not only a servant, but a friend to her mistress during her long term of service, for the latter gave her a part of the profits of the wool which she spun in her

the parents of the young maiden. In the north of England people are estimated by what they are themselves, rather than what they are by station, and the near kindred of this industrious girl, who was both a farmer's daughter and a farm servant, knew her worth,

and grudging her to her suitor; but at length opposition was overcome, and the young people were married, having for their best portion the gifts of health, strength, perseverance, and economy, and the grace to know and feel the goodness of the Almighty Giver of these endowments.

Thus Mr. and Mrs. Crossley began their married life, and worked on until we see them living in the small house by the small mill. But there is a sight which the outside world would never have been favored with if the tenderness of a son had not, as with a ray of light, photographed it for our contemplation. The morning after the husband and wife took possession of their new abode, the latter rose, as her custom was, very early, before it was light, and went out to walk alone in the mill-yard, there to think of the mercy which had thus far been shed upon her life's journey; and there she prayed, making also, as holy women of old often did, a vow that if God should bless her and her partner in life with prosperity in that place, the poor should have a share of it. Her meditations and promise made an indelible impression on her mind and conscience, and were in after years often recalled and repeated, and, what is better, acted upon. They prospered to the full amount of their aspirations, and they consecrated their household to piety and their means to benevolence. But a mother's first earthly duties are to her family, and this mother trained her children with a due regard to the needs of the spiritual as well as to the wants of the intellectual man. Precept was strengthened by example.

John, Joseph, and Francis, the first born in 1812 and the last in 1817, were reared in a home uncontaminated by luxuries. They grew to manhood, embodying in their lives the principles of industry, benevolence, and deep religious impressions. The youngest son exhibited in a pre-eminent degree the admirable qualities of his mother. Her firm, independent, decided, and Christian character was crystallized in his daily life.

Halifax, where the early-morning incident which we have mentioned took place, was then but a small manufacturing town; now it has the reputation of being one of the handsomest for its size of the English country centers. Its public buildings arrest the admiring gaze of every sojourner. Conspicuous among them are some edifices which have an interest beyond their architectural beauty. A spacious and noble building, called the Refuge, has been erected to accommodate four hundred children

at the cost of fifty thousand pounds, or two hundred and fifty thousand dollars, and endowed with an income of fifteen thousand dollars per annum. Here the fatherless children of respectable parents are educated carefully and liberally, so that they may fill the positions in life which they would have been trained to fill had they not been orphaned. Near to these are some handsome and comfortable mansions, dedicated to the support of old and infirm worthy people whom fortune has not favored. A chapel with a tower stands near, and schools and commodious residences are around, to say nothing of the great carpet manufactory and mills which alone cover an area of eighteen and a half acres. The machinery used therein is driven by steam-power, and the number of people employed is between four and five thousand. If a stranger, beholding this vast emporium of industry and intelligence, and the public and domestic buildings already mentioned, should ask when and by whom these structures were reared, one name would be given in reply—Crossley—the surname of a most remarkable trio of brothers, of whom the youngest is Sir Francis Crossley, a member of Parliament who for some years represented Halifax, and at the time of his death was a member for the West Riding of Yorkshire, the northern division.

The most considerate attention has been given in the plan and disposition of the Crossley works for the comfort of the workmen. Well-ventilated mills, commodious houses, first-rate schools, and spacious places of worship have been provided; but the munificence of Sir Francis Crossley did not stop here. Perhaps it was owing to the impressions produced upon his mind while making a tour in America in 1855, where the fine scenery and the numerous places of public resort, where parks and gardens garnish every considerable town, that he determined to make some provision in the way of a resort for the laboring classes of Halifax. He determined to lay out a peoples' park in his native town, and carried into effect his philanthropic purpose at a cost of thirty thousand pounds—one hundred and fifty thousand dollars. On the 14th of August, 1857, a tract of twelve and a half acres, beautifully arranged with trees, shrubs, and winding paths, and all those rural accessories which delight the eye of the lover of the beautiful, was presented by Sir Francis to the town authorities. His townsmen were grateful for this magnificent gift, and attested their appreciation of the donor by erecting a statue in commemoration of the event, on the third anniversary of the

opening of the park. The pedestal has the following inscription: "This statue of Francis Crossley, Esq., M. P. for the West Riding of the county of York, donor of the People's Park, was erected August 14, 1860, by the inhabitants of Halifax, his native town, as a tribute of gratitude and respect to one whose public benefactions and private virtues deserve to be remembered."

Sir Francis not only gave this park to Halifax, but he also deposited a large sum of money in the hands of the corporation to meet the necessary expenses of keeping it in order from year to year.

In 1864 the firm of Crossley Brothers, which had been in existence so many years and so successfully, was transformed into a limited liability company, or stock association, with a

capital of one hundred and sixty-five thousand pounds sterling, or eight hundred and twenty-five thousand dollars. This capital was divided into shares of fifteen pounds each, or seventy-five dollars, three-fifths of the shares being owned by the firm, while the remainder were taken up by others, preference being given to the mill employés, so that the more intelligent and provident of the working people became shareholders and personally interested in a great and profitable manufacturing concern.

As we have announced already in our April number, Sir Francis died on the 15th of January last, deeply regretted by his fellow-citizens of Halifax; and also regretted by all England, and by not a few in America, who esteemed him for his lofty character and true Christian benevolence.

TUNES TAUGHT TO BIRDS.

EACH kind of bird sings its own peculiar notes, but all may be taught to sing regular tunes. The mocking-bird and thrush learn tunes without training. But, by a regular education, other birds may become fine performers. A contributor to the *Nursery* says:

Last summer I was at a friend's house at Nahant. I rose early in the morning, and went down stairs to walk on the piazza. While there I heard, as I thought, some person whistling a tune in a very sweet style. I looked around, but could see no one. Where could the sound come from? I looked up, and saw a little bird in a cage. The cage was hung in the midst of flowers and twining plants.

"Can it be," thought I, "that such a little bird as that has been taught to sing a regular tune so sweetly!"

I did not know what to make of it. When my friend came down stairs, she told me that it was indeed the little bird who had whistled the sweet tune. Then my friend cried out to the bird, "Come, Bully, Bully, sweet little bullfinch, give us just one more tune." And then this dear little bird hopped about the cage, looked at its mistress, and whistled another sweet tune. It was so strange to hear a bird whistle a regular tune!

"Now, Bully," said my friend, "you must give us 'Yankee Doodle.' Come, come, you

shall have some nice fresh seed if you will whistle 'Yankee Doodle.'" And the little thing did whistle it, much to my surprise.

My friend then told me that she had brought the bird from the little town of Fulda, in Germany, where there are little schools for teaching these birds to sing. When a bullfinch has learned to sing two or three tunes, he is worth from forty to sixty dollars, for he will bring that price in France or England.

Great skill and patience are needed to teach these birds. Few teachers can have the time to give to the children under their charge so much care as the bird-teachers give to their bird-pupils.

The birds are put into classes of about six each, and kept for a time in a dark room. Here, when their food is given to them, they are made to hear music, so that, when they have eaten their food, or when they want more food, they will sing, and try to imitate the tune they have just heard. This tune they probably connect with the act of feeding. As soon as they begin to imitate a few notes, the light is let into the room, and this cheers them still more, and makes them feel as if they would like to sing. In some of these schools, the birds are allowed neither light nor food till they begin to sing. These are the schools where the teachers are most strict.

After being thus taught in classes, each bullfinch is put under the care of a boy, who plays his organ from morning till night, while the master or mistress of the bird-school goes round to see how the pupils are getting on.

The bullfinches seem to know at once when they are scolded, and when they are praised by their master or mistress; and they like to be petted when they have done well. The training goes on for nine months; and then the birds have got their education, and are sent to England or France, and sometimes to America, to be sold.

[All animals, all birds, and all reptiles—even fishes—are susceptible of culture and improvement. So are plants, roots, and fruits.

And, above and beyond all, are human beings capable of almost illimitable development and improvement, both of body and mind.

A thief *may* be converted into an honest man. One with a murderous temper may be so subdued and improved, that he will perform acts of kindness instead of cruelty. Even the hardest-hearted criminals now in our prisons may, through *right* treatment, on phrenological principles, be made into tolerable, if not good, citizens. Let us teach birds, cats, dogs, horses, but especially let us teach teachers how to educate children. Oh! the patience—oh! the Christian charity, affection, love, necessary to open and direct the minds of God's creatures *aright*!]

HOMES OF FAMOUS AMERICANS.

BY LAURA C. HOLLOWAY.

MONTICELLO.

THE early history of our country is not rich with coloring of legend or ballad, nor is there aught of romance connected with its first years of discovery and settlement. It is only eloquent in the stories of hardships and sorrows, which soon taught the pioneer the value of life in the possibility of sudden death.

Men came to the New World and toiled because of their needs; and while it was adaptable to their condition and acceptable to their necessities, it was not home. No old memories connected themselves with its wildness—no recollections of the past—it was new and immense, crude and strange.

Here they found nothing that reminded them of England. Cosy homes and village churches they missed, and the emigrants longed for the burying-grounds of their forefathers for the inheritance of the dead, which in all ages has been man's most sacredly-prized possession.

"We shall be very lonely in far-off Virginia, father," was the utterance of a sobbing daughter, as with husband and children she bade adieu to England. "For a time, my child; by-and-by your burying-ground will be there, and you will love the frontier."

Bitter reflection, but withal a noble tribute to the humanity of human nature, and often to be verified in the new colony.

Until within the past century church-yards and family burying-grounds were the only places thought of in America in connection with the graves of a household. Old home-

steads rarely changed hands, and when they did the burying-ground was considered sacred and never molested. Virginia more than any other State beautified the sacred inclosures set apart for the dead, and all over the Old Dominion are to-day traces of that sentiment.

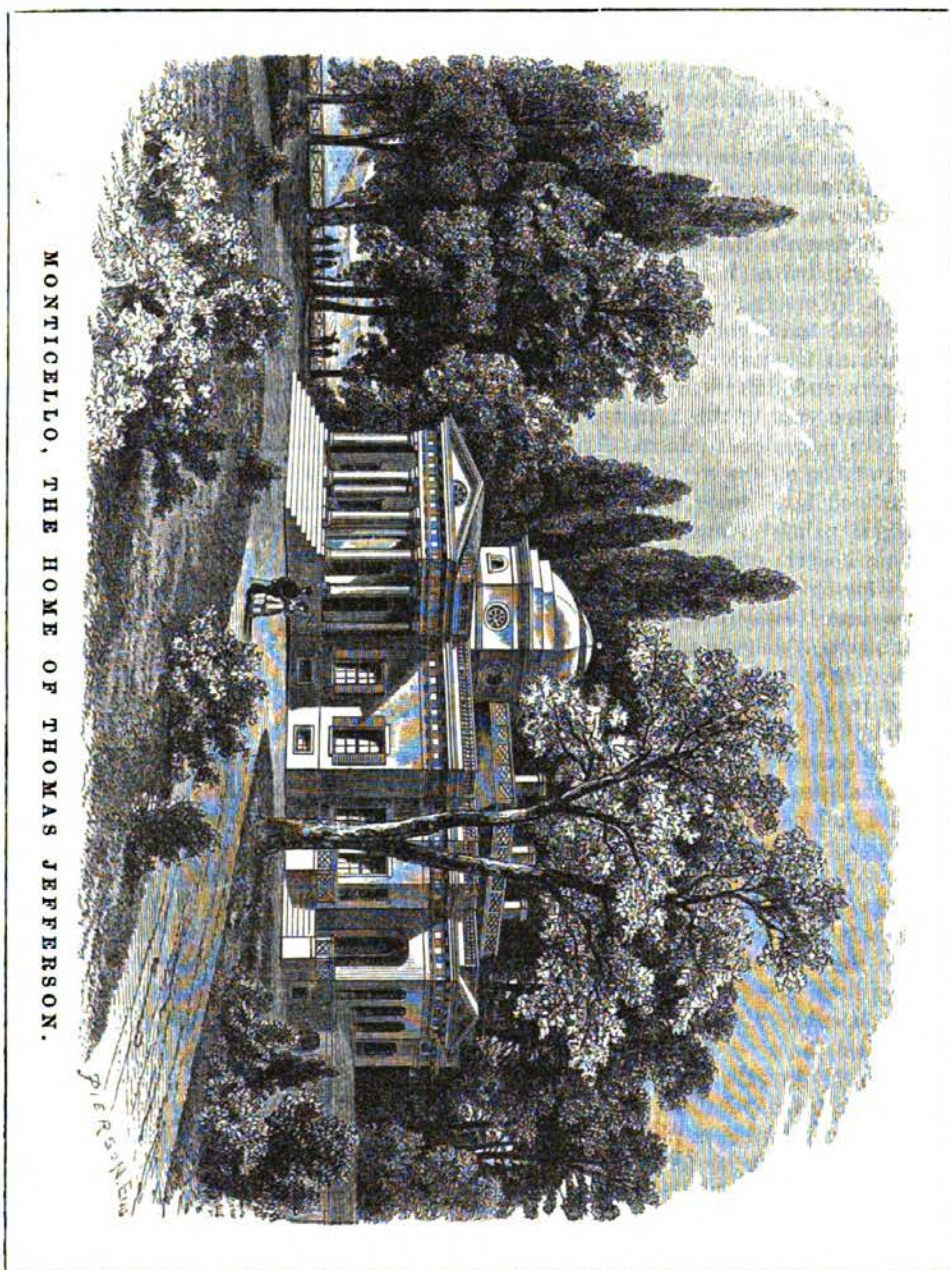
Generally speaking, the people were of English descent, and their estates were continued in families by entail. Thus they felt that their burying-grounds would remain intact for ages to come.

The country grave-yards of Virginia, like the village church-yards of England, are alike characteristic, and vividly recall all those similarities of taste and habits which reproduced in this portion of the New World the peculiarities of the old. No residence of like antiquity in that State has a burial-ground of such interest as that of Monticello.

It was once a part of the natural woods, and is situated at the summit of the mountain and not far distant from the house. Tall trees grow among the graves, while clinging vines and weeds nearly hide from view the tombs and slabs. Jefferson's monument, a tall granite, such as he had requested should be placed over his grave, in order to protect by its plainness the spot it was intended to designate, towers above the high wall which incloses a space of perhaps an hundred feet square. In this inclosure lie buried now three generations of the family. Glimpses of other monuments may be seen from this point, while below and above the tall linden and hickory trees hide

from view the windings of the terraced road. It is a lonely, retired spot, this mountain grave-yard, yet not too difficult of access for the hordes of vandals who have robbed the tombs of almost every letter, and otherwise desecrated the inclosure of the dead. Noth-

tomb is a reproach to the civilization of the nation, and a standing witness against the barbarians who, incapable of achieving individual fame, are yet anxious to attach themselves in some way to greatness, even if they have to rob its graves to form the connecting link.



MONTICELLO, THE HOME OF THOMAS JEFFERSON.

ing in the old Commonwealth attests the decay of the wealth of its people more than the graves of its illustrious men. In every instance they are more than neglected, and seem to be visited only to be pillaged. Jefferson's

The selection of this spot by Jefferson as a family burying-ground resulted from a compact made between his friend and cousin, Dabney Carr, and himself. In the early days of their boyhood, a great oak which stood on

the plantation was their rallying place, and under its shade they were wont to con their lessons. In their youthful love for each other they mutually agreed that the survivor should bury the other near this favorite tree, and years afterward Jefferson had the remains of his early friend and brother-in-law removed from Shadwell* to this spot. Such was the origin of the burying-ground at Monticello. More than fifty years later, and when his wife had lain there four and forty years, Jefferson was placed beside her. On the other side of him lie the remains of his second child, Maria Eppes, and at the head of the three has since been laid Martha, the well-beloved daughter. No pen can describe the utter desolation of this spot, associated as it is with such a man as Jefferson. Worship of ancestors is not one of our national traits, but gratitude ought to lead Americans to preserve the tombs of the early framers and defenders of its liberties, when, as is the case in this instance, the descendants are powerless to do so. The slabs which have fallen off the top of the vault, the rubbish-covered head-stones, and the tottering wall, suggest painful thoughts. The graveyard has no keeper; only the birds appear to maintain a loving interest in it, and even they sometimes hurry away from its solitude to sing their sweetest songs in the less lonely forest below. Weeds grow undisturbed in its walks, the road is covered over with vines, and the tombs and railways are sadly decayed. Through its broken bars is seen a picture of desolation that can not fail to impress all who view it with indignation and sorrow.

But if the burying-ground is a dismal sight, even more so is the old homestead of Jefferson. Like all the Old Dominion mansions of half a century ago, it is in a state of decay, consequent upon the neglect and indifference with which they have been treated since the days of planter hospitality and prosperity. No other American home of like fame has been permitted to fall into the state which at present marks Monticello, yet there are grave reasons for this, and no individual or collection of individuals is responsible for it. But before reproducing the causes which led to its desertion and desolation, it is well, perhaps, to dwell upon the events of its career as the residence of one of the very greatest men this or any other country has produced. Monticello was sufficiently completed in 1770 to enable Jefferson to make it his permanent abode. Two

years later he was married, and, after establishing his bride there, both time and expense were lavished upon it to make it a fit abode for her. His fortune at that time, united to hers, was sufficiently large to yield him an income of seven thousand dollars a year. Unfortunately, it was the custom in those days—as it is to some extent now—for the wife's property to be merged in the husband's, and Mrs. Jefferson's was no exception. Had it been otherwise, probably, her portion might have been eventually secured to her children, and Monticello remained theirs forever.

The Marquis de Chastillux, who visited the place in the spring of 1782, gives a pleasing description of its appearance:

"On the summit of one of the mountains, we discovered the house of Mr. Jefferson, which stands pre eminent in these retirements. It was himself who built it and preferred this situation; for although he possessed considerable property in the neighborhood, there was nothing to prevent him from fixing his residence wherever he thought proper. . . . He calls his house *Monticello* (in Italian, Little Mountain), a very modest title, for it is situated upon a very lofty one, but which announces the owner's attachment to the language of Italy, and, above all, to the fine arts, of which that country was the cradle, and is still the asylum. . . . This house, of which Mr. Jefferson was the architect, and often one of the workmen, is rather elegant and in the Italian taste, though not without fault; it consists of one large square pavilion, the entrance of which is by two porticos ornamented with pillars. The ground-floor consists chiefly of a very large, lofty saloon, which is to be decorated entirely in the antique style; above it is a library of the same form. Two small wings, with only a ground-floor and attic story, are joined to this pavilion, and communicate with the kitchen, offices, etc., which will form a kind of basement story, over which runs a terrace. My object in this short description is only to show the difference between this and the other houses of the community; for we may safely aver, that Mr. Jefferson is the first American who has consulted the fine arts to know how he should shelter himself from the weather."

"The house as here described," adds Mr. Randall, the genial biographer of Jefferson, "was but a part of the completed Monticello of after years, and was far less perfect in its appointments."

From the pen of one who knew Monticello as the home of his childhood is gathered a de-

* Shadwell, Jefferson's birth-place, was situated four miles from Monticello.

scription of the view from the summit of the mountain on which the house stands:

"The top of the mountain has been leveled by art. This space is six hundred by two hundred feet, circular at each end. The mountain slopes gently on every side from this lawn; one hundred feet from the eastern end stands the mansion. Its projecting porticos, east and west, with the width of the house, occupy one hundred feet each way. It approaches on either hand within fifty feet of the brow of the mountain, with which it is connected by covered ways ten feet wide, whose floors are level with the cellars, and whose flat roofs, forming promenades, are nearly level with the first floor of the dwelling. These turning at right angles at the brow, and widening to twenty feet, extend one hundred feet, and terminate in one-story pavilions twenty feet square, the space beneath these terraces forming basement offices. From this northern terrace the view is sublime; and here Jefferson and his company were accustomed to sit, bare-headed, in the summer until bed-time, having neither dew nor insects to annoy them. Here, perhaps, has been assembled more love of liberty, virtue, wisdom, and learning than on any other private spot in America."

And of the owner of this beautiful home, of his true appreciation of and fondness for it, nothing can be more conclusive than the testimonies of his grandchildren, who each and all lived there with him, and who have repeatedly given assurance of his genuine traits of character. Jefferson loved his home, therefore it became possible for him to render it an attractive spot. His was a large-hearted, unselfish nature; hence it was not difficult to draw about him those who best understood the value of such attributes.

"My grandfather's manners to us, his grandchildren," writes one of them, "were delightful; I can characterize them by no other word. I loved him very devotedly, and sought every opportunity of being with him. As a child, I used to follow him about, and draw as near to him as I could. To him I owed all the small blessings and joyful surprises of my childish and girlish years. His nature was so eminently sympathetic, that with those he loved he could enter into their feelings, anticipate their wishes, gratify their tastes, and surround them with an atmosphere of affection. When about fifteen years old, I began to think of a watch, but knew the state of my father's finances promised no such indulgence. One afternoon the letter-bag was brought in. Among the

letters was a small packet addressed to my grandfather. It had the Philadelphia mark upon it. I looked at it with indifferent, incurious eye. Three hours after, an elegant lady's watch, with chain and seals, was in my hand, which trembled for very joy. My Bible came from him, my Shakspeare, my first writing-table, my first handsome writing-desk, my first Leghorn hat, my first silk dress. What, in short, of all my small treasures did not come from him? . . .

"My sisters, according to their wants and tastes, were equally thought of, equally provided for. Our grandfather seemed to read our hearts, to see our invisible wishes, to be our good genius, to wave the fairy wand, to brighten our young lives by his goodness and his gifts."

And this was the secret of the deathless interest he inspired in the hearts of those who were thrown in contact with him, and who, in visiting Monticello, unconsciously looked at surrounding objects through the medium of his fascination.

In 1826 Jefferson died. He had been in the service of his country sixty-one years, and all that time had been away from Monticello, save on occasions of short visits to the place. Mostly abroad, and always when in his own country in another State, he had found no time to look after the business interests of his large farms, and managed as they were by slaves, they went to ruin as fast as time and want of thrift could send them.

At last the end came. Monticello passed into the hands of strangers, and the loving grandchildren and beloved daughter went forth penniless, as the doors of their old home closed upon them forever. Captain Levy, a warm admirer of Jefferson, and an officer of the United States Navy, bought Monticello, and kept it for many years in a state commensurate with his means and his tastes. In 1862 he died, leaving it to a class which it is not destined to ever reach or benefit.

"I give," reads his will, "devise, and bequeath my farm and estate at Monticello, in Virginia, formerly belonging to President Thomas Jefferson, together with all the rest and residue of my estate, real, personal, or mixed, not hereby disposed of, wherever or however situated, to the people of the United States, or such persons as Congress shall appoint to receive it, and especially all my real estate in the city of New York, in trust for the sole and only purpose of establishing and maintaining at said farm of Monticello, in Virginia,

an agricultural school for the purpose of educating, as practical farmers, children of the Warrant Office of the United States Navy whose fathers are dead. . . . Should the Congress of the United States refuse to accept of this bequest, or refuse to take the necessary steps to carry out this intention, I then devise and bequeath all the property hereby devised to the people of the State of Virginia, instead of the people of the United States, provided they by acts of their Legislature accept it and carry it out as herein directed."

After the probate of this will, a suit was brought, and the cause was carried to the New York Court of Appeals, and a decision given there which declared that the devise and bequest of Monticello and the residuary estate were invalid and void, and could not be carried out in Virginia. Monticello meanwhile had been in the hands of the Confederate authorities, and had been sadly defaced. The will was probated in Virginia after the war, but, as its provisions had been declared invalid and void, it rested with the family of the deceased to take measures to preserve and dispose of the estate, and this could be done only by means of a suit for partition. That suit was brought, the Commonwealth appearing by the Attorney-General. The Virginia court set aside the will, and ordered sale and partition among the heirs of the commodore. The estate went into the hands of the commissioner appointed by the court, and still remains there. None of the family have the least authority over it. The commissioner advertised to sell it, but some persons claim to have found a law which would sustain the devise, and therefore in the name of the State an appeal has been taken to the Court of Appeals in Virginia, where the case now is.

The decay of the mansion is the decay of

years, and it is complete. The shingles on the roof are so rotten that the rain drives in at every frequent shower, and all the once beautiful woodwork of the place is worm-eaten and sadly dilapidated. The paint of a former time has left no vestige, and what was once bright and defined is now stained and blurred. Even the old English bricks, durable as ever, are blackened from the effects of countless storms and rains. The rooms are unoccupied, save in one or two instances they are made to do service as a receptacle for harness or farm implements. The old roof is dangerous, and liable to fall at any moment; the covered walks are moulded and overgrown with a green sediment, the result of the combined influences of dampness and darkness. The front of the house is all hacked and disfigured with names; and the shrubbery on the lawn is hardly less destroyed than is the house itself.

There never was a bed in Jefferson's home. Alcoves in the walls, with slats affixed to staples in these alcoves, served the purpose instead. The stairways are narrow, and the bed-room ceilings low. It is related that when Mrs. Jefferson died her body had to be lowered from one of the half-circular windows, because of the impossibility of carrying a coffin down the narrow stairway. All these evidences of discomfort are discernible now, and most observed because of the wondrous improvements made since that day.

Monticello is a total wreck. Its fame should have won for it a better fate, but the baleful curse of poverty left those who would have rescued it powerless. In a few years the "Little Mountain" will be shorn of its glory, and only heaps of rubbish will remain to remind the passing stranger that on its summit was once Monticello, the famous home of Thomas Jefferson, the third President of the United States.

STEREOSCOPY; OR, THE MARVELS OF BINOCULAR VISION.

THE camera has effected a marvelous agrarian revolution. The proprietor of property can no longer claim its exclusive ownership; he shares it with the world. The photographer, like the ancient Magian making his devotions at the altar of the Sun, as a reward for his fervency, is permitted to steal the form of whatsoever his fancy craves. Though there be but one Niagara cataract in the substance, any ragged vagabond can possess the

beauties which make it precious. This is, undoubtedly, a great stride toward the millennium. For if there be one sin more seductive than another, it is covetousness, which will henceforth cease to tempt, and we may certainly hope that we are on the threshold of the evangelical thousand years. If an individual owns a stereoscope—a skeleton can be purchased for a dollar—he can pity the most sumptuous millionaire. Own

ership and bondage hereafter will be convertible terms, and the lucky stereoscopist can eternally, fancy free, revel amid the charms of the beautiful.

Stereoscopy means really the artful capacity to perceive plain figures in a picture perspectively and in solidity. The eye is a natural lens of transcendent organism, and is capable, unaided, of seeing actual objects in relief, or, in other words, relatively at long and short distances. In the case of real objects, one eye attains the same effect as both. But not so in pictures. Pictures require the exercise of both eyes in order to appear in relief. Binocular perception illusively projects the plain figures as solids. The appreciation of solidity, it is conceded, is purely the result of visual education; the infant wildly reaches for an object and misses it. It is ascertained that each eye independently perceives a separate image of the same object, and each, in some respects, unlike the other, because the points of vision are some inches apart, according to the distance between the eyes. These images are subtly communicated to the brain, which instantly reconciles and combines them into a perfect single picture; and it is not until this process has been effected that we really see an object as it is. Therefore the stereoscope is provided with two lenses. Professor Towler, the scientist, asserts, that in order to obtain the effect of solidity in a picture, the axis of the eyes must converge toward a certain focus intersected by the rays of light passing between corresponding points in the twin pictures of the stereograph. The stereoscope, then, is simply a machine which squints for us, although the naked eyes can be taught to squint likewise, but at the cost of comfort. The two pictures which, when mounted in company, constitute what is known as a stereoscopic view, or more properly a stereograph, are separated by an interval of two and seven-eighths inches, the average separation of the eyes. Persons whose optics vary from this average distance of separation can be accommodated with an instrument with movable sides, called the Emersonscope, which enables them to adjust the lenses to suit their sight.

Euclid (300 B. C.) perceived the fact that each eye saw an object under different as-

pects, and had a vague conception of binocular vision. In the seventeenth century Francis Aguilonius, a Jesuit, wrote a learned treatise on this phenomenon of vision. In 1823 Mr. Elliot, an Englishman, wrote an essay "On the Means by which we Obtain our Knowledge of Distances by the Eye." In 1834 he conceived the notion of the arrangement of pictures to be viewed stereoscopically. In 1838 Professor Wheatstone made the first stereoscope, a reflecting one, in England, and exhibited it before the Royal Society. In 1839 Professor Elliot, in ignorance of Wheatstone's invention, made an "ocular" stereoscope. In the meanwhile photography had been making rapid strides, and gave a new impulse to stereoscopy. In 1849 Sir David Brewster, the eminent scientist, brought out his lenticular stereoscope. In 1850 Mons. Daboscq introduced the Brewster stereoscope to the notice of the Imperial Institute of France, together with several daguerreotype views. These views and stereoscopes were afterward displayed at the World's Fair at London in 1851. This introduced them into public notice, and the instrument has become a popular favorite and a source of infinite delight. The invention of Brewster introduced the use of prisms instead of reflectors, which are cheaper and more portable. The principle of binocular vision may be illustrated with playing dice. If two dice are held out at arm's length, with the six dots facing the eyes and the two dots exposed, a portion of the three dots on the left-hand side will be seen by the left eye, and but a little of the center one on the right-hand side. The same images, therefore, present different aspects to either eye. When combined, the two images produced the actual appearance of the object. The name stereoscope is a compound of two Greek words, and signifies "to see solid." The glasses of the scope are made by cutting a double convex lens in two, and reversing the halves. Being parts of lenses the prisms possess the property of magnifying. The stereoscope is truly a gay deceiver; it dissolves the twin pictures, and counterfeits a new picture combining the features of both.

A SENTIMENTAL JOURNEY.

If a learned pundit were to assert that the

jugglers of his mystic land could at pleasure conjure into a heap the scattered treasures of beauty that adorn the earth as easily as they swallow sabres, cobra de capellos, and other tid-bits, American courtesy could hardly withhold the giving of the lie. But you who plume yourselves on your skepticism, follow me! I am about to conduct you to the magic temples wherein sleep the mingled graces of the world. I guide you through the animated mazes that bewilder the great thoroughfare, until we cross the portals of 591 Broadway. This establishment is the emporium for the food of photographers—the largest on the planet. As we enter, we are stared at listlessly by eccentric forms with glazed eyes. We are at the home of the stereoscope, the graphoscope, and of the huge and weird-like megalithescope; the latter is a native of Venice. This is the enchanter's realm. Within yon tomb-like cases repose the spirits of earth's fairest forms, whose carcasses moulder far off in strange lands, the prey of the elements. But these shades of perennial beauty survive unscathed by time, like the disembodied spirit-divine. Doubtless your fancy paints the presiding genius of this spectral paradise as a demon, or, at least, a fierce, hoary sorcerer. If you do, your fancy fools you, for he is a "nice young man." We bid him mildly to produce the gems of artist Nature, or rather their ghosts. We firmly seize—our nerves are steelled by resolution—a "skeleton." We mean, of course, a skeleton stereoscope. We have often yearned to ascend the cloud-capped Alps, and to gaze aloft at their majestic grandeur; to poise ourselves upon their glittering pinnacle and contemptuously look down on the crawling world beneath. But we had casually heard that the paths were quite slippery, and that it was very uncertain as to when the avalanches would take their usual slides, so we deferred our visit until the weather should have moderated. But now we have the chance to do the thing safely. We imperiously demand the Alps. The genius meekly hands it out. We weigh them on our hands. We gaze at the glaciers in their glitter; we behold the avalanches "whom a breath draws down in mountainous overwhelming," and we hold our breath. Then, like the ad-

venturous Hannibal, we cross the Alps, and softly descend into the bosom of the land of song, of sunshine, and tradition. We hold now captive to our will the accumulated splendors of antiquity. Before us looms the massive proportions of the Coliseum, desolate in ruinous perfection. Not far away towers the Pantheon, where mighty Jove put up with all the lesser divinities, but only tenanted now by the wild weed and the bristling brier. We mount the lofty forum, whence Tully hurled the lightning of his eloquence; now all silent, save for the yelping cur. We next approach with reverence the gems of antique art. We feast on the charms of the Venus de Medici, and look admiringly on the stalwart Hercules. We but conceive the thought, and are transported amid Oriental monuments of sweet and sacred memory. We do homage at the shrine of Solomon's Temple, and inspect those ponderous piles—the Pyramids. Capricious as a woman, we sigh for the rugged scenes of a more northern clime, and find ourselves freezing all night on a Staten Island ferry-boat trying to cross the bay. All of a sudden we explore the labyrinths of the Mammoth Cave, lighted up by a magnesia luminary; and in a jiffy we are at the gold diggings in Colorado. Before we are able to secure a precious nugget, we are languishing in the tropics, bewildered with its gorgeous scenery. Of a sudden we think of the great Rebellion—we know not what suggests the thought—and we remember Brady's celebrated sketches of the battle dramas. We demand them; we thrill at the sight of the fierce conflict partially revealed through the curtain of smoke. Amid the heaps of slain we espy a dying brave, still struggling with the grim destroyer. Turning from these sad spectacles, we take a trip to Coney Island to revive our spirits. Thus we go, making trip after trip, as though we wore Puck's magic cap. One moment we are in fairy-land, among simple shepherds and honest people; in the next, by way of contrast, we visit a Fulton Street prayer-meeting, or ramble in California, and finally, in the natural course of events, wind up at Greenwood Cemetery. But we must not omit to mention, even at the cost of rising from the dead, the titanic glories of the Yo Semite. This valley-para-

dise nestles in the monster lap of the Rocky Mountains. Here nature wielded a ponderous chisel. Think of a cap of liberty 4,240 feet in height; of three giant brothers 4,000 feet high, and of a dome, which might crown the heavens, 6,000 feet in altitude. But speak no more of ladies' waterfalls—true, they may be pretty and useful after a fashion—but they are little things, large though they often seem, beside the Yo Semite Falls, 2,634 feet high! But when I attempt to describe the

shadows on the Mirror Lake, my pen falters. Tranquil at the feet of the Rocky Mountains glistens Mirror Lake. Beneath its placid surface is reflected the towering peaks of its colossal bulwark, as though in days of yore mountains had gone on a frolic—lost their perpendicular—staggered into the lakes, plunged and remained ever since to cool off. But we must come to a close. Stereoscopy is a thing of beauty and a joy forever. Let all enjoy it.

Physiognomy, or Signs of Character.

*Of the soul, the body form doth take,
For soul is form, and doth the body make.—Spenser.*

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONTINUED FROM OUR MAY NUMBER.]

IN the expression of the passions there is a compound influence in operation. Let us contemplate the appearance of terror. We can readily conceive why a man stands with eyes intently fixed on the object of his fears, the eyebrows elevated to the utmost, and the eye largely uncovered; or why, with hesitating and bewildered steps, his eyes are rapidly and wildly in search of something. In this



FIG. 1.—TERROR.

we only perceive the intent application of his mind to the object of his apprehensions—its direct influence on the outward organ. But observe him further: there is a spasm on his breast, he can not breathe freely, the chest is elevated, the muscles of his neck and shoulders are in action, his breathing is short and rapid, there is a gasping and a convulsive motion of his lips, a tremor on his hollow cheek, a gulping and catching of his throat; and why does his heart knock at his ribs, while yet there is no force of circulation?—for his lips and cheeks are ashy pale.

So in grief, if we attend to the same class of phenomena, we shall be able to draw an

exact picture. Let us imagine to ourselves the overwhelming influence of grief on woman. The object in her mind has absorbed all the powers of the frame, the body is no more regarded, the spirits have left it, it reclines, and the limbs gravitate; they are nerveless and relaxed, and she scarcely breathes; but why comes at intervals the long-drawn sigh? why are the neck and throat convulsed? what causes the swelling and quivering of the lips, and the deadly paleness of the face? or why is the hand so pale and earthly cold? and why, at intervals, as the agony returns, does the convulsion spread over the frame like a paroxysm of suffocation?



FIG. 2.—DISTRESS.

It must, I think, be acknowledged when we come to arrange these phenomena, these outward signs of the passions, that they can not proceed from the direct influence of the mind alone. However strange it may sound to unaccustomed ears, it is to the heart and lungs and all the extended instrument of

breathing that we are to trace these effects. Over such motions of the body the mind has an unequal control. By a strong effort the outward tokens may be restrained, at least in regard to the general bearing of the body, but who, while suffering, can retain the natural fullness of his features, or the healthful color of his cheek, the unembarrassed respiration and clearness of the natural voice? The villain may command his voice and mask his purpose with light and libertine words, or carry an habitual sneer of contempt of all softer passions, but his unnatural paleness and the sinking of his features will betray that he suffers. Clarence says to his murderers:

"How deadly dost thou speak!
Your eyes do menace me: Why look you pale?"

But the just feelings of mankind demand respect; men will not have the violence of grief obtruded on them. To preserve the dignity of his character, the actor must permit those uncontrollable signs of suffering alone to escape, which betray how much he feels and how much he restrains.

Even while asleep these interior organs of feeling will prevail and disclose the source of expression. Has my reader seen Mrs. Siddons in *Queen Katharine*, during that solemn scene where the sad note was played which she named her knell? Who taught the crowd sitting at a play, an audience differing in age, habits, and education, to believe those quivering motions and that gentle smile and those slight convulsive twitchings, to be true to nature? To see every one hushed to the softest breathing of sympathy with the silent expression of the actress, exhibits all mankind held together by one universal feeling; and that feeling, excited by expression, so deeply laid in our nature as to have influence without being obvious to reason.

To illustrate this curious subject, I shall first explain the extensive connections which are established between the great organs that sustain life and the muscular system of the face, neck, and chest. I shall then show that the functions of these organs are affected by passions of the mind. I shall prove that this connection subsists at the moment of birth, and accompanies us through life; and, finally, that from this source are derived those ob-

scure indications of emotion in the countenance and general frame which can not be explained on the supposition of a direct influence of the mind on the muscles of expression.

The heart and the lungs may be safely taken as two parts which are combined in the same function. The action of the heart and the motion of the lungs are equally necessary to the circulation of that blood which is fitted for the supply of the body, and the interruption of their motion threatens life.



FIG. 3.--RACHEL.

Accordingly, these two organs are united by nerves, and, consequently, by the closest sympathy; and in all the variations to which they are liable they are still found to correspond, the accelerated action of the one being directly followed by the excitement of the other.

The motion of the lungs proceeds from a force altogether external to them; they themselves are passive, being moved by a very great number of muscles which lie upon the breast, back, and neck; that is, the exterior muscles give play to the ribs, and the lungs follow the motions of the chest. The heart and lungs, though insensible to common impression, yet being acutely alive to their proper stimulus, suffer from the slightest change of posture or exertion of the frame, and also from the changes or affections of the mind. The impression thus made on these internal organs is not visible by its effect upon them, but upon the external and remote muscles associated with them. This law exists in all mankind; we see the consequence

in those susceptible and nervous persons whom the mere change of position or the effort of rising or the slightest emotion of mind flutters and agitates. But it is when the strong are subdued by this mysterious union of soul and body, when passion tears the breast, that the most afflicting picture of human frailty is presented, and the surest proof afforded that it is on the respiratory organs that the influence of passion falls with so powerful an expression of agony.

The next circumstance of this detail to which I beg attention, is the extent of the actions of respiration: the remoteness of the parts agitated in sympathy with the heart. The act of respiration is not limited to the trunk; the actions of certain muscles of the windpipe, the throat, the lips, the nostrils, are necessary to expand those tubes and openings, so that the air may be admitted through them in respiration, with a freedom corresponding with the increased action of the chest. Without this the sides of these pliant tubes would fall together, and we should be suffocated by exertion or passion. Let us consider how many muscles are combined in the simple act of breathing; how many are added in the act of coughing; how these are changed and modified in sneezing. Let us reflect on the various combinations of muscles of the throat, windpipe, tongue, lips in speaking and singing, and we shall be able justly to estimate the extent of the muscles which are associated with the proper or simple act of dilating and compressing the chest. But how much more numerous are the changes wrought upon these muscles when nature employs them in the double capacity of communicating our thoughts and feelings; not in the language of sounds merely, but in the language of expression in the countenance also; for certainly the one is as much their office as the other.

The nervous system is complex in an extraordinary degree; but the reader may not be deterred from attempting to understand at least so much that there is a class of nerves appropriated to respiration. These nerves arise from the same part of the brain; the great central nerve descends into the chest to be distributed to the heart and lungs, and the others extend to the exterior muscles of the chest, neck, and face. Under the influ-

ence of the central nerve, the diverging external ones become the instruments of breathing and of expression. The labor of many months discloses to the anatomist but a part of these nervous cords, and the consideration of the uses they serve presents the most overwhelming proof of the excellence of design,—but a design made manifest by the results rather than comprehensible in its means.

Can we perfectly understand how tickling the throat should produce a convulsion over the whole frame, in which a hundred muscles are finely adjusted and proportioned in their actions to expel what irritates the windpipe? or how tickling the nostril should make a change in these muscles, throw some out and bring others into action, to the effect of sending the air through a different tube to remove what is offensive, and all this without the act of the will?

Let us see how the machine works. Observe a man threatened with suffocation; remark the sudden and wild energy that pervades every feature; the contractions of his throat, the gasping and the spasmodic twitchings of his face, the heaving of his chest and shoulders, and how he stretches his hands and catches like a drowning man. These are efforts made under the oppressive, intolerable sensation of his heart; and the means which nature employs to guard and preserve the animal machine, giving to the vital organ a sensibility that irresistibly excites to the utmost exertion.

It is this painful sensation that introduces us to "this breathing world;" which guards the vital functions through life as it draws us into existence. Pain is the agent which most effectually rouses the dormant faculties of both mind and body. While the child slumbers in the womb it does not live by breathing, it possesses an organ which performs the office of the lungs. In the birth there is a short interval between the loss of the one organ and the substitution of the other; nor would the breath ever be drawn or the lungs perform their function but for this painful and irresistible *nervus*, which calls the whole corresponding muscles into action. Spasms and contractions are seen to extend over the infant's chest; the features are working, and the muscles of the face agitated probably for the first time; at last air is ad-

mitted into the lungs, a feeble cry is heard, the air in successive inspirations fully dilates the chest, and the child cries lustily. Now the regular respiration is established and the animal machinery subsides into repose.

"We came crying hither,
Thou know'st, the first time that we smell the air
We wawl and cry:—I will preach to thee: mark,
When we were born, we cry, that we are come
To this great stage of fools!"—*Leor.*

With the revolution which the whole economy has undergone, new wants are engendered, new appetites; these are again lulled by the mother's breast. During all this no one sympathizes with the little sufferer, the grimace with which he enters the world excites only smiles.

"On parent's knees, a naked, new-born child,
Weeping thou sat'st, while all around thee smiled—
So live, that sinking in thy last long sleep.
Calm thou may'st smile, when all around thee weep."
From the Persian.

"Anger," says Lord Bacon, "is certainly a kind of baseness, as it appears well in the weakness of those subjects in whom it reigns—children, women, old folks, sick folks." But this I may say, that anger is at no period of life so strongly impressed upon human features as in the first moment of our visiting the light. At the instant of our birth, an association of muscles is formed and at the same time put in operation, stamping a character of expression which betrays the wants of the body in early infancy and the sufferings of the mind in the after period. The frame of the body, constituted for the support of the vital functions, becomes the instrument of expression; and an extensive class of passions, by influencing the heart, by affecting that sensibility which governs the muscles of respiration, calls them into co-operation so that they become an undeviating and sure sign of certain states or conditions of the mind. They are the organs of expression.

Returning now to the contemplation of any of the stronger passions, we comprehend much which was before obscure. We see why that grief which strikes the heart should affect the regularity of breathing;* why the muscles of the throat should be affected with spasm; why slight quivering motions pass from time to time over the face, the lips,

* "The grief that does not speak,
Whispers the o'er-fraught heart, and bids it break."

Macbeth.

and cheeks and nostrils; because these are the organs of respiration, organs which have their muscles united to the sensibility of the heart, and moved under its influence. Now we comprehend how the passion of rage or terror binds and tightens the chest; how the features are so singularly agitated by the indirect as well as by the direct influence of the passions; how the words are cut; how the voice sticks in the throat; how the paralyzed lips refuse the commands of the will, so that they are held in a mixed state of violence and weakness, which, more than any fixed expression, characterizes the influence of the passion.

BLUSHING.—The sudden flushing of the countenance in blushing belongs to expression as one of the many sources of sympathy which bind us together. This suffusion serves no purpose of the economy, while we must acknowledge the interest which it excites as an indication of mind. It adds perfection to the features of beauty.*

The color which attends exertion or the violent passions, as of rage, arises from general vascular excitement, and differs from blushing. Blushing is too sudden and too partial to be traced to the heart's action. That it is a provision for expression may be inferred from the color extending only to the surface of the face, neck, and breast, the parts most exposed. It is not acquired; it is from the beginning. It is unlike the effect of powerful, depressing emotions which influence the whole body. The sudden conviction of the criminal is felt in every pore; but the color caused by blushing gives brilliancy and interest to the expression of the face. In this we perceive an advantage possessed by the fair family of mankind, and which must be lost to the dark, for I can hardly believe that a blush may be seen in the Negro.†

* Dr. Burgess, who has written a volume on "Blushing," affirms that a Circassian maid who blushes brings a higher price in the slave market!

† A wound in the black leaves a scar in which the dark pigment of the skin is wanting; and the white spot formed by such a cicatrix in the face of the Negro redens with passion.

In contrasting, by comparative anatomy, the internal structure of animals, we find in some classes parts of the organization apparently useless or superfluous, to discover the full development and appropriate functions of which, we must refer to other classes. If the black blushes unseen, it only shows that the incidental color does not affect the general structure and processes.

We think of blushes as accompanying shame; but it is indicative of excitement. There is no shame when lively feeling makes a timid youth break through the restraint which modesty and reserve have imposed. It is becoming in youth; it is seemly in more advanced years in women. Blushing assorts well with youthful and with effeminate features, while nothing is more hateful than a dog-face that exhibits no token of sensibility in the variations of color.

in the face they have merely to operate on the skin, the lips, nostrils, and eyelids, they require less power, and are therefore more delicate. And that power is not always directly under the will like the muscular exertions of the body and limbs; it is often involuntary and is inseparably united to the conditions or affections of the mind. The latter consideration gives much interest to the subject; for by this provision in the muscles, the very spirit by which the body is

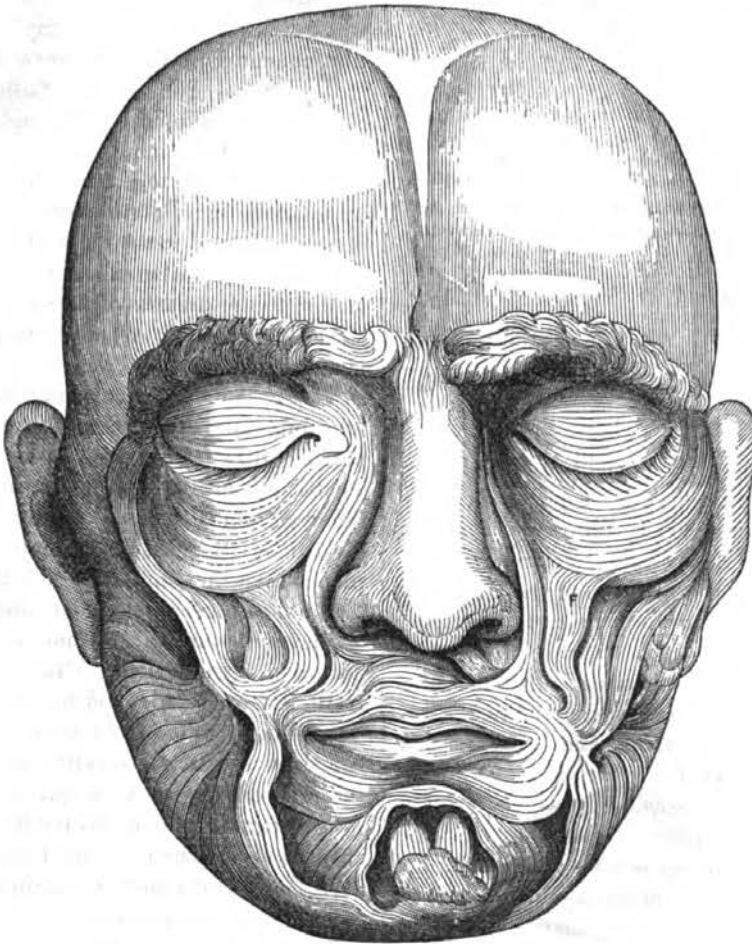


FIG. 4.—MUSCLES OF THE FACE.

ESSAY IV.

OF THE MUSCLES OF THE FACE IN MAN.

THE muscular part of the animal frame consists of a peculiar fibrous substance possessing the power of contraction, and, consequently, of producing motion. In the limbs and trunk the muscles are attached to the bones, and are distinct and powerful; but as

animated and the various emotions shine out in the countenance.

It has been said that the superiority of the human face in expression is an accidental effect of the number of muscles which are provided in man for the faculty of speech. That many of the muscles called into action in speech are also employed in expression will be readily admitted; but besides these

there are muscles of the human features which have no connection with the voice, and are purely instrumental in expression. Further: the human countenance is pre-eminent, not only in having muscles proper to man, but we shall find that he also possesses the peculiarities of two great classes of the lower animals, having the muscles which are characteristic of both these classes combined in his face.

To understand what follows, it is not necessary for the reader to know more of the structure of muscles than that they are formed of distinct packets of fibres; that the extremities are called their origins and insertions; the fixed extremity attached generally to some point of bone being the origin; the extremity which is moved the insertion. I shall consider the muscles of the face in three groups: first, those which surround the eye; secondly, those which move the nostrils; and lastly, those around the mouth. And first,

OF THE MUSCLES OF THE FOREHEAD AND EYEBROW.

The forehead is, more than any other part characteristic of the human countenance. It is the seat of thought, a tablet where every emotion is distinctly impressed; and the eyebrow is the moveable type for this fair page. "Frons hominis tristitiæ, hilaritatis, clementiæ, severitatis, index est."—*Pliny*.

The eye is the chief feature of expression. It takes a thousand shades from the relations

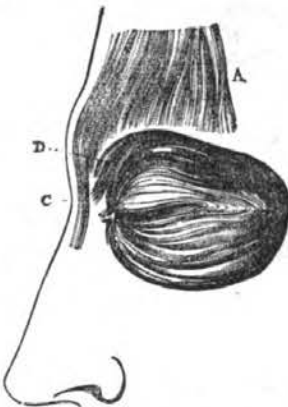


FIG. 5.—MUSCLES OF THE FOREHEAD AND EYEBROW.

of the surrounding parts; and the eyebrow, that dark arch which surmounts it, is itself an eloquent index of the mind. Some one has called the eyebrow "the rainbow of peace, or the bended bow of discord."

There are four muscles attached to the eyebrow:

1. A muscle, called *occipito frontalis* (A), descends over the forehead, and is inserted into the eyebrow where it mingles its fibers with the next muscle. The simple action of

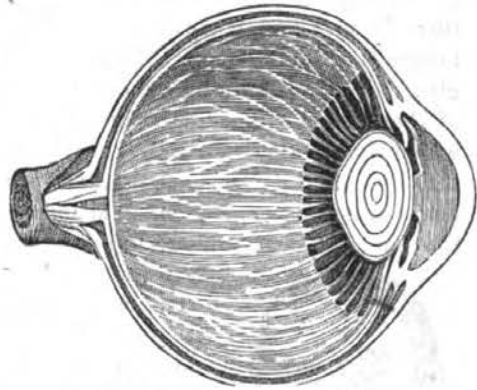


FIG. 6.—ANATOMY OF THE EYE.

the frontal portion of the *occipito frontalis* is to raise or arch the eyebrow, as in surprise or doubt; or as if we meant to say, "I must look further into this."

2. The muscle which closes the eyelids is the *orbicularis palpebrarum* (B). We shall divide this muscle into three parts. Its fibers surround the eye, being spread in a circular direction upon the margin of the orbit and the eyelids. The stronger portion encircling the orbit shuts the eyelids with that spasmodic force which is felt when something irritating is thrown into the eye. The paler and more delicate fibers, which lie more immediately upon the eyelids, gently close the eye as in winking or in sleep. A third set of fibers is situated directly on the margins of the eyelids.* It is the outer and stronger circle which draws down the eyebrow and is the direct opponent of the *occipito frontalis*.

3. The third muscle (C) is properly a part of the first, and is termed the *descending slip* of the *occipito frontalis*. As it descends on the side of the nose to be attached to the bridge, it has a different effect from the greater part of the muscle; it draws down the inner extremity of the eyebrow.

4. The next muscle is the *corrugator supercilii* (D). It arises from the lowest point of the frontal bone, where it joins the bones of

* For the actions of these different portions of the general muscle, see the author's "Practical Essays," Part I. on Squinting.

the nose, and running, obliquely upward, is inserted into the skin under the eyebrow. The two muscles acting together knit the eyebrows. These are the muscles of the forehead and eyebrows.

In the arched and polished forehead, terminated by the distinct line of the eyebrow, there is an especial capacity for indicating human thought. The lines drawn here often give meaning of a high character to motions of the features in the lower part of the face which would otherwise express mere animal activity. And it is not a fleshy brow that is best adapted for expression. The fullness of the forehead and around the eyes which



FIG. 7.—A MODERN GLADIATOR.

the artists and poets combined to give to Hercules, conveys the idea of dull, brutal strength and a lowering expression; while the forehead of the thin, pale student, may evince intelligence or elevation of thought.

The *levator palpebræ superioris*, the muscle which raises the upper eyelid and is an opponent of the orbicularis, arises deep within the orbit, and is attached in front to the cartilage which gives form and firmness to the upper eyelid.

There are also within the orbit six other muscles which are inserted into the eyeball. Their action is a subject of high interest, to discuss which would require a volume. I must limit myself to the question of the expression of the eye, referring the reader for more ample illustrations to those memoirs which treat of the subserviency of the muscles to vision, and of their action in cleaning the cornea and protecting the organ.*

OF THE EXPRESSION OF THE HUMAN EYE.

The eye is the most lively feature in the countenance; the first of our senses to awake, and the last to cease motion. It is indicative of the higher and the holier emotions—of all those feelings which distinguish man from the brutes.

A large eye is not only consistent with

beauty, but necessary to it. The eye of the eagle, even of the ox, is familiar in the sim-



FIG. 8.—FINE EYES.

iles of poets. The Arab expresses his idea of a woman's beauty, by saying, that she has the eye of the gazelle; it is the burden of their songs. The timidity, gentleness, and innocent fear, in the eye of the deer tribe, are compared with the modesty of a young girl. "Let her be as the loving hind and pleasant roe." In the eye we look for meaning, for human sentiment, for reproof.*

Do architects study enough, when arranging the masses of their buildings for effect, how the shadows will fall? The statuary, at all events, must. "The eye ought to be sunk," says Winkleman.† Yes, relatively to the



FIG. 9.



FIG. 10.

forehead, but not in reference to the face. That would give a very mean expression. It is the strong shadow produced by the projecting eyebrow which gives powerful effect to the eye in sculpture.

We have said that the eye indicates the holier emotions. In all stages of society and in every clime the posture and expression of reverence have been the same. The works of the great masters who have represented the more sublime passions of man may be adduced as evidences: by the upturned direc-

* "I gave him," said Dr. Parr, "the chastisement of my eye."

† "Aux têtes idéales, les yeux sont toujours plus enfoncés, qu'ils ne le sont en général dans la nature."

* See the "Nervous System," 4th edition, page 145; "Bridgewater Treatise on the Hand," 4th edition, p. 329.

tion of the eyes and a correspondence of feature and attitude they address us in language intelligible to all mankind. The humble posture and raised eyes are natural, whether in the darkened chamber or under the open vault of heaven.

On first consideration, it seems merely consistent that when pious thoughts prevail man should turn his eyes from things earthly to the purer objects above. But there is a reason for this which is every way worthy of attention. When subject to particular influences, the natural position of the eyeball is to be directed upward. In sleep, languor, and depression, or when affected with strong emotions, the eyes naturally and insensibly roll upward. The action is not a voluntary one; it is irresistible. Hence in reverence, in devotion, in agony of mind, in all sentiments of pity, in bodily pain with fear of death, the eyes assume that position.

Let us explain by what muscles the eyes are so revolved. There are two sets of muscles which govern the motions of the eyeball. Four straight muscles, attached at cardinal points, by combining their action, move it in every direction required for vision; and these muscles are subject to the will. When the straight muscles, from weariness or exhaustion, cease to guide the eye, two other muscles operate to roll it upward under the eyelid: these are the oblique muscles. Accordingly, in sleep, in fainting, in approaching death, when the four voluntary muscles resign their action, and insensibility creeps over the retina, the oblique muscles prevail, and the pupil is revolved, so as to expose only the white of the eye. It is so far consolatory to reflect, that the apparent agony indicated by this direction of the eyes, in fainting or the approach of death, is the effect of encroaching insensibility—of objects impressed on the nerve of vision being no longer perceived.

We thus see that when wrapt in devotional feelings, and when outward impressions are unheeded, the eyes are raised by an action neither taught nor acquired. It is by this instinctive motion we are led to bow with humility, to look upward in prayer, and to regard the visible heavens as the seat of God.

"Prayer is the upward glancing of the eye,
When none but God is near."

Although the savage does not always distinguish God from the heavens above him, this direction of the eye would appear to be



FIG. 11.—PRAYERFUL.

the source of the universal belief that the Supreme Being has his throne above. The idolatrous negro in praying for rice and yams, or that he may be active and swift, lifts up his eyes to the canopy of the sky.* So, in intercourse with God, although we are taught that our globe is ever revolving: though religion inculcates that the Almighty is everywhere, yet, under the influence of this position of the eye, which is no doubt designed for a purpose, we seek Him on high. "I will lift up mine eyes unto the hills from whence cometh my help."†

See, then, how this property of our bodily frame has influenced our opinions and belief—our conceptions of the Deity, our religious observances, our poetry, and daily habits.

Although the geologist may think that the account in the Scriptures of the formation of the earth is contradicted by his theories, we perceive in our present investigation a strict agreement in man's inmost structure with the book of life; and we may say with

* BARBOT: "Description of Guinea."

† The same influence which thus induces a posture of the body in accommodation to the eye makes the attitude of stooping the sign of supplication, of obeisance, and courtesy among all nations. "And Arannah looked and saw the king and his servants coming on toward him; and Arannah went out, and bowed himself before the king, on his face upon the ground." So, Abraham: "And he lift up his eyes and looked, and lo, three men stood by him; and when he saw them he ran to meet them from the tent door, and bowed himself toward the ground."

The Mohammedans, in acts of devotion, cross their hands on their bosom and incline the head.

Kepler, that man should not resign his natural feelings and thoughts in pursuit of philosophy, "but that lifting up his natural eyes, with which alone he can see, he should from his own heart pour himself out in worship to the Creator, being certain that he gives no less worship to God than the astronomer."

By this physical conformation, combined with our highest quality of mind, we are led to the expression of devotion. The design of man's being was that he might praise and honor his Maker. Gratitude is the debt of our nature, and in this property of the eye there is pointed out to us how that gratitude, which is the distinguishing character of our minds, is to be directed.

The orbicularis muscle of the eyelids acts powerfully in certain kinds of expression. In laughing and crying, the outer circle of this muscle, as it contracts, gathers up the skin about the eye; and at the same time it compresses the eyeball. A new interest is given to the subject when we inquire into the object of that compression. It has a distinct relation to the circulation of the blood within the eye. During every violent act of expiration, whether in hearty laughter, weeping, coughing, or sneezing, the eyeball is firmly compressed by the fibers of the orbicularis; and this is a provision for supporting and defending the vascular system of the interior of the eye from a retrograde impulse communicated to the blood in the veins at that time. When we contract the chest and expel the air, there is a retardation of the blood in the veins of the neck and head; and in the more powerful acts of expulsion the blood not only distends the vessels, but is even regurgitated into the minute branches. Were the eye not properly compressed at that time, and a resistance given to the shock, irreparable injury might be inflicted on the delicate textures of the interior of the eye.* Hence we see a reason for the closed state of the eyelids, and wrinkling of the surrounding skin, and twinkling of the eye in hearty laughter.

* "If we separate the eyelids of a child to examine the eye, while it cries and struggles with passion, by taking off the natural support to the vascular system of the eye, and the means of guarding it against the rush of blood then occurring, the conjunctiva becomes suddenly filled with blood, and the eyelids everted."—*Nervous System*, p. 175.

In the drunkard, there is a heaviness of eye, a disposition to squint, and to see double, and a forcible elevation of the eyebrow to counteract the dropping of the upper eyelid, and preserve the eyes from closing. Hogarth has very happily caught this hanging of the eyelid, with the effort in the muscles of the forehead to prevent it from actually falling. The peculiar expression may be thus explained. In the stupor of inebriation, the voluntary muscles of the eyeball resign their action to the oblique muscles, which, as we have seen, instinctively revolve the eye upward when insensibility comes on: at the same time the muscle which elevates the upper lid yields, in sympathy with the oblique muscles, to the action of the orbicularis which closes the eyes, and the eyelid drops. The condition is, in short, the same as that of falling asleep, when the eyeball revolves as the lids close. It is the struggle of the drunkard to resist, with his half-conscious efforts, the rapid turning up of the eye, and to preserve it under the control of the voluntary muscles, that makes him see objects distorted, and strive, by arching his eyebrows, to keep the upper lid from descending. The puzzled appearance which this gives rise to, along with the relaxation of the lower part of the face, and the slight paralytic obliquity of the mouth, complete the degrading expression.

[TO BE CONTINUED.]

QUEEN LOUISA OF PRUSSIA.

LOUISA, the Queen-Consort of Frederick William III., and mother of the present King of Prussia, was born March 10, 1776, at Hanover, where her father, the Duke of Mecklenburg Strelitz and brother of Queen Charlotte, consort of George III. of England, was then commandant. In May, 1782, when Louisa was only in her seventh year, she experienced her first trial, the death of her careful and affectionate mother. Soon after this lamentable occurrence, to soften the bitterness of his domestic associations, the Duke, with his family of several young children, removed from the town of Hanover to reside in the adjacent palace of Herrenhausen. In the fall of 1784 he contracted a second marriage, with the Princess Charlotte, the sister of his late wife. The fostering care of this beloved step-

mother was not long enjoyed ; for early in the winter of 1785 death demanded her also as another victim from this illustrious family. The now twice-widowed husband resigned the Hanoverian service and returned with all his family to Darmstadt. Louisa and her sister, Frederica, were there placed in the charge of their maternal grandmother, the Landgravine of Hesse-Darmstadt, by whom they were carefully educated.

Romantic tours and journeys on frequent occasions gave diversity to the life of the

of Prussia, Frederick William II., with his two sons, the Crown Prince and Prince Louis, took the field, and with his division of the army drove the French from Frankfort and made that city his headquarters, in December, 1792. The next spring, the Landgravine of Hesse-Darmstadt, with her granddaughters, Louisa and Frederica, had occasion to pass through Frankfort on their way home. They stopped, however, for a short time in the city, and were to be introduced to the king and take their departure the same evening, after the termina-



PORTRAIT OF QUEEN LOUISA OF PRUSSIA.

young princess, contributed to enlarge her mind with much information of general utility, enabled her to acquire considerable knowledge of character, and at the same time developed her notable power of conciliation and of rendering happy all who approached her.

The following curious circumstances brought the Crown Prince of Prussia and his future consort into personal contact:

The German States, soon after the outbreak of the French Revolution, united to resist the encroachments of the French, and the King

tion of the performance at the theater ; but the king caused the two young princesses to be invited to supper, which invitation was accepted. At the first glance, the Crown Prince was irresistibly attracted by the loveliness of the young Princess Louisa.

In April, 1793, shortly after this interview, they were betrothed ; and on the day before Christmas of the same year were married, amid great festivities, at Berlin. Their union was one of mutual affection, and productive of much conjugal happiness.

On his father's death, the Crown Prince, with his consort, were called to the privileges and duties of the throne. The queen admirably fulfilled all the duties of her high station as well as those of wife and mother. Her beauty, her grace, her benevolent and lofty character attracted the hearts of all, and her goodness won the confidence of the nation.

The violation of Prussian territory by Napoleon, and his increasing arrogance toward Prussia, led to war. The queen, popular and beloved by all classes, exerted strong influence in the country in opposition to the French Emperor, and on that account she became specially obnoxious to him. She followed her husband into the camp, and the battle of Jena had commenced before she returned to Berlin.

The fatal defeat which he sustained at Jena prostrated the Prussian monarchy, and wrung the heart of the queen with bitter grief. Blow followed blow, and the depth of humiliation was reached by Prussia when, after the battle of Friedland, Frederick William reached Til-

sit almost without a kingdom. Silesia was, however, restored on the intercession of the queen, and this, with the provinces on the right bank of the Elbe, was all that remained to Prussia.

Queen Louisa, on the 16th July, 1810, was seized with what proved to be her last illness, an abscess on the lungs, and died shortly afterward.

On the 23d of December, 1810, the anniversary of the day on which Louisa of Strelitz entered Berlin as a bride, her corpse was consigned to its final resting-place at Charlottenburg. In 1840 her husband was laid by her side.

In the character of Queen Louisa, as has been remarked, "Germany saw its best self personified, love of liberty and country, pleasure in domestic and family life, taste for poetry, deep and pious gratitude for all the gifts of God." This may account for the high veneration in which her name and memory are still held throughout the Fatherland.

Department of Ethnology.

True Christianity will gain by every step which is made in the knowledge of man.—*Spurzheim*.

THE CHINESE IN THE PHILIPPINES.

BY CAPT. N. W. BECKWITH (NAUTES).—IV.

NO account of the Philippine Islands, however concise, could be deemed fair without some notice of their Chinese residents—already the most indispensable portion of the population, and every day increasing in importance.

If we gauge the general prosperity of any commonwealth by the searching test of the cheapness with which it affords the necessities of life to its citizens, then is China by far the most surpassingly prosperous in the whole family of nations. For in her markets the masses feed and clothe themselves *better* than the laborers of any other division of the Eastern Hemisphere, at an average monthly rate of *eighty-seven cents per head*.^{*} This astonishing economy is a result due, first, to her unparalleled agricultural system, and the co-existing, co-extending pisciculture which is everywhere made its concomitant, or, rather, its *comple-*

ment; for the "Celestials" are wiser than we, and utilize with care and intelligence every atom of what *we* denominate "waste,"—sewerage of every description, etc.—for manures; hence every harbor, lake, river, stream, canal, and even ditch, holds pure and unpolluted water, and no obstacle exists to the propagation of fish, or the growth of the edible water-plants which every Chinese farmer raises in profusion, converting their water-courses into practical aquaria. Secondly, the unequalled thoroughness and completeness of her means of communication—the vast and closely-interwoven net of which covers the smiling face of the Flowery Kingdom like a veil of lace-work, and ramifies to the most remote nooks and corners of the whole giant empire; so that the producer is always the near neighbor of some market for his surplus silk, cotton, rice, fish, fowls, fruit—what not! And, lastly, to the free schools and *compulsory* education, which her Government has maintained for centuries, by which the intelligence of her population

^{*} It may aid the reader's conceptions to remember that the Chinese "cash"—their *only actual* coin—is the equivalent of \$0.00.1.

has been trained and developed up to the point of devising and maintaining these unique advantages.

Where the cost of subsistence is so cheap, it necessarily follows that the purchasing power of capital is enhanced beyond all comparison, and the money value of labor, like that of any purchasable commodity, becomes correspondingly reduced; hence, in China we find that wages also have settled to a figure far below the lowest conceptions of the Western laborer,* yet it is always in excess of the necessary expenditure for living to about the same proportion as is realized by the latter; and herein we see a living demonstration of the fallacy of that pernicious sophistry with which many persuade themselves and their fellows that "high wages" are an indication of a progressing common weal.

Absolutely the condition of the Chinese laborer is about the same as that of the laborer of any other country in prosperous times. He holds about the same chances for amassing a competence, and no more, if we leave out of consideration his superior habits of steadiness

* In the "treaty ports," where the exigencies of the Western commerce are often producing sudden and pressing demands for labor, wages rule far above the steady rates common to the empire. A domestic obtains from three to four dollars per month, out of which he clothes himself; an out-door laborer—"coolie"—who feeds, lodges, and clothes himself, sometimes obtains forty cents per day (Sundays excepted); and a skillful mechanic perhaps ten cents more. Such cases, however, are abnormal, occasioned entirely by local and often ephemeral causes, and are so frequently interrupted by depressions as to make it difficult to ascertain a safe average. The "sampan-pigeon" gives doubtless the best indication of what that is. A "sampan" is a large boat, thoroughly well built and equipped, fast sailing and rowing, and—the particular class of which I am speaking—two-masted in rig, is manned by five or six adults, both sexes, who live exclusively on board, as well as the family, usually anything but a small one, of the owner, who is also the commander. The hire of one of these boats and her whole *personnel*, in Hong Kong, for example, remains during all the fluctuations of the labor market ashore at the one steady fixed rate—from 1864 to 1867 the writer can vouch for it from actual experience—of *seventy-five cents per day*. Out of this the owner pays and subsists his crew, rears his family, keeps his boat in complete order, repair, cleanliness, and decoration—oftentimes at the close of an engagement making his employer a "*cumshaw*," besides the annual cost of licensing, etc., and yet lays by more than a bare competence; for he is generally able to dower a daughter on her marriage, and not unfrequently can afford to "set up" a son, when he becomes competent, with a new "sampan"—all her "tackle, apparel, and furniture," as the charter party phraseology hath it, complete. Yet such a craft, with her marvelous intricacies of internal arrangement and accommodation, could not be produced in New York for less than \$650 to \$700.

and providence, which give him a decided advantage. Therefore, as with his European fellow, the offer of increased wages is an allurement, powerful in proportion to its excess of the customary rates; this is *why* he emigrates. But he is more cautious than the European. He likes to provide against the possibility of bad treatment when away from home; he does not know what may be the cost of subsistence in this foreign land, therefore he requires the items of food and clothing to be assured to him also; and, above all, must be made certain of his eventual return to the Land of Flowers. These and other such stipulations assume the form of a written contract,* for periods varying from five to eight years, and rates ranging from two and a-half to four dollars per month; this is *how* he emigrates. But the sum of his earnings will be, *in China*, tenfold the value it represents in the inflated markets of the Fan-qui; hence, however he may prolong his absence, be it to quadruple the period originally contracted for—in the pursuit of more riches, either by labor, trade, or speculation—his grand ultimate is always—home.

In all this we have the key to the grand Chinese *exodus* which will characterize this age—although as yet it is nothing. The knowledge of the, to them immense, wages to be earned in foreign lands, is as yet confined to the comparative sprinkling, at a few points along the coast, of those who feel the influence of Western intercourse. But when that knowledge penetrates, as it is fast doing, throughout the length and breadth of the land, stirring up its toiling hundreds of millions with that adventurous spirit which is the precise analogue of the overmastering impulse which attains historic importance in our own gold-seeking "rushes" and "fevers," then will our statesmen find themselves confronted with a phenomenon, for which, not alone all American, but all European history also, affords neither precedent nor parallel. In the Gothic emigration across the Danube, during the ill-omened reign of Valens, impelled by those "all-destroying Huns," who in their turn were fugitives before the victorious generals of the Chinese Empire—as its ancient records abundantly prove—is to be found the nearest approach to a resemblance; and there are chapters in that famous story not all devoid of instruction for the Amer-

* This particular does not now generally apply to the Philippine immigrant; intercourse and proximity have perfected his knowledge of the country, and he knows how he can manage there.

ican politician in this connection. Nevertheless, a widely different policy—not alone from that in which the Roman emperor so disastrously failed, but from any that he *might* have devised appropriate for the treatment of a semi-barbarous nation of soldiers—is indicated for the proper management of the vast, civilized, industrial invasion soon to sweep upon the Pacific shore. It will be well if we are warned and wise in time; for according as it is governed, it means utter ruin or unexampled prosperity and power—and between these two there lies no middle course. Its coming is simply inevitable! By thousands and tens of thousands there are even now outpouring upon the Philippines, Singapore, and the straits settlements, Java, Peru, California, Australia, and around the Cape of Good Hope, into the Spanish, French, and British West Indies, and Guiana; yet these swarms are not even the vanguard of the myriads which a few years more will send forth. Wherever these pioneers have gone, large and rapid expansions of trade, caused by the vigorous impulse which they communicate to the various industries, have immediately followed.

The return of these, and their display of the wealth—for such it will prove in China—which they acquired in the “unknown land of the red-faced men,” is the “little leaven” that is fast leavening the whole mass of the Mongolian industrial classes, whose aggregate is above *five hundred millions!*

The mere anticipation of such a tremendous movement is staggering. But our fields are ample. On their vast and fertile expanses the enormous wave of Asiatic emigration may expend its forces with the most blessed results,—if only timely wisdom sway the national councils. That unreal mockery, the “heathen Chinese,” which affrights the feeble souls of many would-be statesmen, must be exorcised, and its place filled by a true conception of the “coming man,” whose intelligence, skill, self-helpfulness, prudence, steadiness, docility, and indomitable continuity, make him above all other races the nearest to a realization of the ideally perfect artisan.

During the supremacy of the Company of the Philippines, Chinese, as well as all other foreigners, were jealously excluded from the Spanish possessions in the East; and many years elapsed after its abolition in 1884, although the legal barriers were overthrown along with the monopoly in whose interests they were erected, ere any number introduced themselves upon these islands, so strong were

the social antipathies of Spaniard and Tagal alike. Their number now is not far from ninety thousand, having oscillated about that figure for the last decade, in consequence of the wretched policy of the colonial government, which aims at regulating their proportion to the native population solely with reference to its own political ends; and, for the present at least, its object is attained by encouraging no more fresh arrivals than what are sufficient to fill up the deficit caused by those who return.

Political non-participation the Chinaman everywhere observes as a matter of course—as, indeed, is to be expected from his peculiarly non-meddlesome character and disposition, as well as from the lack of interest he must feel who intends but a temporary residence only, not a *home*; but the Philippine Government makes this assurance doubly sure by a law of positive disqualification. Not content with so much, it proceeds to the careful consideration of the paramount question, viz., how much he can be made to contribute to the exchequer, which, as we have heretofore seen, is ever a clamoring inanity, and burdens him with passports, fines, taxes, licenses, and manifold entanglements of sealing-wax and red-tape, together with imposts and “benevolences” on behalf of the Church. Something of these last, however, he may escape by a renunciation of Buddha or Koon-fu-tze, a docking of his tail, and a baptism,—when he will become petted by the priest, and, to a certain extent, looked on with a forgiving eye by the authorities. All these exactions the still irrepressible Fo-khee bears with imperturbable patience, good-naturedly “rubbing along,” and contriving to add dollar to dollar, maugre all the “squeeze-pigeon,” as he emphatically distinguishes the collective enactments by virtue of which money, and yet more money, is extorted from him.

Dreaded by the Tagals, despised by the Spaniards, persecuted by the Church, plundered by the State, and persistently slandered by everybody, he is yet as indispensable an element in the body politic as was his prototype, the much oppressed Jew of the middle ages. Already he has become almost the sole depository of the specie of the country, and its internal commerce is exclusively in his hands, as well as all the industries of the capital and other centers of trade, generally speaking, where are now found no other mechanics or shop-keepers; while, as previously hinted, the Government finds him of vital importance as a means of maintaining that balance of opposing interests

which is the condition of its own existence; its position well paralleled by that of the monkey-judge in the fable—"in re" the feline claimants of the spoliated cheese. However, despite its adroit manipulations, the native jealousy is waning rapidly; marriages between Chinamen and Tagal women have become common—a natural consequence of its self-stultifying policy in prohibiting the immigration of Chinese women—and a new variety of the *genus homo*, the Chino-Tagal, or Tegalo-Mongol, has become of sufficient importance to merit a place among the other innumerable products of mis-



FIG. 1.—THE "KWAN" OF MANILLA.

cegenation on the already formidable rolls of the ethnologist. Meantime, the millions of non-producing acres of the unequaled Philippine soil, which the Chinese, either by his own proper hand or through his civilizing influence upon the Tagal, would quickly render useful to mankind, remain, because of the exclusive policy of the powers that be, howling wildernesses of forest and swamp, or jungle, wherein the savage Negrito and Igorrota hunt or fight.

The political status of the Chinese in the Philippines is unique. It forms in itself a little State which regulates its own internal affairs, having as its head a "Capitan" (see cut),* as he is denominated by the Spaniards, but whom his own people name by the distinguished title *Kwan*; for which the Portuguese have given us the much misapplied equivalent, *mandarin* (from *mandar*, to command), and which the Cantonese frequently use interchangeably with their own proper word. He always appears, officially, in the dress and in-

signia of a *kwan*, according to the style of the ante-Mantchoo *regimé*; and hence, as may be inferred from that, and although in some measure treated by the Philippine Government as a consul-general, he has neither the accreditation nor the usual immunities which pertain to that important station.

In point of fact, although it may appear somewhat remarkable, this little colony within a colony is, in its civil organization, a pure democracy. All its officers are elective, and hold their seats for stated periods, while the suffrage—prepare for a surprise, "feller-citizens,"—is *Educational!* and uncircumscribed in aught else, not even in point of age, for a child might vote if found possessed of the needful attainments.

Whether because the management of their own proper affairs is thus relegated entirely to themselves, or from their characteristic painstaking to avoid all offence-giving,* or both, the *Fo-khee* is a model citizen. No one ever hears of a misbehaving Chinaman. No Wang, Ching, Yap, or Choy, which are apparently Celestial equivalents for Smith, Brown, Jones, and Robinson, ever figure in police report or prison list. Enter a "tribunal" when you will, but among the many shades and types of humanity there present, you shall never chance upon a "child of *Fo-hi*"—except, indeed, among the

* It would doubtless amuse a Chinaman could he know that I have employed this cumbrous and awkward phrase to convey the idea of a characteristic for which he has a proper name, familiar in his mouth as "household words." Should he also be aware of the significance insisted upon by us, as attaching to the *absence* of certain words in other languages, and couple it with the universal Anglo-Saxon swash-bucklerism with which we swagger about "this narrow world," he might deal us such a *coup de maître* with our own favorite club as would stun our smirking self-complacency—if that be possible! No man can see much of the genuine Chinese, at home or abroad, without being impressed, first, by a quality which may be very well conveyed by the term "self-helpfulness;" and, next, by the characteristic alluded to in the text. It is not mere "tact,"—though on a short acquaintance it might be, and, indeed, continually is set down for that—but something higher, born of the teachings of their Koon-fu-tsze when he stamped his golden rule upon the mind and life of his people: "*He who is conscientious, and who feels toward others the same sentiments he has for himself, is not far from the taou. What he does not wish should be done to him, let not himself do to others.*" With this great maxim, far more active in his being than Christians keep the corresponding injunction of their Master, the Chinaman works its negativeness into his daily life and intercourse with men, and refrains. His is the conduct enjoined upon the Apostles—"Be ye wise as serpents and harmless as doves,"—and the quality implied in that mandate is precisely that of which I would convey the idea, for lack of a suitable name, by the words above.

* From a photographic likeness of the actual incumbent in 1865-66.

noisy crowd of spectators there may perhaps be one, as much conspicuous for his grave and quiet deportment as for his shaven head, shining queue, and indescribable neatness of *tout ensemble*. Some keen-eyed philosophic observer he, who has taken a leisure hour to note the manner in which the "Fan-qui" administers his law and justice; and, since he can judge only from what he *sees*, we ought to bear with him, in all Christian consideration, when he honestly refuses to believe in the wisdom and authority of our lawgiver.

It must not be concluded, however, that China furnishes no quota to the large class of *les misérables* to be found in these islands. I have elsewhere labored to explain what are the exceptions to the general rule of good conduct observed by the Chinese in many countries; how that from the southern coast of China, and the outlying islands, come a fierce and truculent race, *not* Chinese, any more than are the Okhotskese, or Don Cossacks, though, like them, a division of the great Mongolian family, and diverging quite as widely in language, manners, religion, and physique as do many of our differing Aryan branches. The same who, constantly warring with the Chinese proper, send forth those swarms of blood-thirsty buccaneers for which the China Sea still bears unenviable repute; the same who, mingling surreptitiously among the honest emigrants, the better to conceal their treacherous intentions, cause those appalling "revolts" or mutinies on board "coolie-ships,"—anent which the papers lie so miraculously—frequently contriving with much cunning, when unsuccessful, to throw the whole blame upon their innocent companions; but who, often failing of their intended capture, are carried away to the foreign land where they had never intended to go, and compelled to fulfill the terms of the contract, which they signed *only* for the purpose of gaining admission to the ship—their contemplated prize. To these wolves caught in their own toils, the years of labor which the Chinaman *seeks*, constitute a punishment worse than death. Death, indeed, is *no* punishment to a transmigrator; nor are the wages of honest toil any consideration in the eyes of a gentleman-freebooter, while work itself means the last and lowest degradation; hence frequent attempts to escape, desperate treacheries, bloodily-planned conspiracies—where they are in sufficient numbers—often followed by despair and suicide, always so easy under their strange notions of the future—which also makes

them the grimmest and most uncompromising of combatants. These are the much-be-slobbered "victims" upon whom universal Exeter-Hall-ism has been wasting its immitigable tears and perennially gushing sympathies.

Owing to their contiguity to China, which obviates the necessity for intending immigrants



FIG. 2.—CHINESE CARPENTERS AT WORK.

to organize into special expeditions, and therefore tends to preclude opportunity for the Ladrone's "pigeon," the Philippines long remained almost absolutely exempt from his malefic presence and machinations. But with the increasing commercial prosperity of later years came increasing chances for the exercise of his peculiar gift. Junks of emigrating Chin-chew men, not alone for the Spanish colonies, but for Singapore, Borneo, Java, or Banca, began to be the especial objects of his cupidity. The alarmed emigrants sought passages in European vessels, although the rates were necessarily so much greater that oftentimes the poorer class were compelled to enter into an arrangement by which the payment was effected after arrival out of their earnings; thus began the system of "deck-passages," now so familiar to every visitor of the China Sea. Thither the Ladrone followed, *incog.*, after a few sharp encounters at sea had taught him that the ship of the Fan-qui was by no means so easy and certain a capture as the junk of the unwarlike Fo-khee, with the results already hinted at. Canton, also, lent a hand to vitiate the out-going stream,—Canton, the far-fallen,

once the glorious "Wu-ching-nan,"* but now half *ladronized* and wholly corrupt; throughout the whole empire (of which, alas! the world has too hastily judged from the specimen this greatest and wickedest of seaports presents,) a proverb of profligacy, venality, and disorder,—wallowing in dissipation and crime,—retrograded to a condition of ignorance unparalleled in the "Great Central Flowery Land" since the far-off time when Hwang-tee destroyed the records and books,—yet withal one of the gayest of capitals; Canton sent forth a modicum of her choice spirits, swindlers, gamblers, thieves, and other interesting samples of her "fancy." But these gentry fell upon evil days. Their steady countrymen knew them of old too well to be deceived by false appearances or protestations, and watched them with the sleepless eye of suspicion. The kwan sought and obtained permission from the Colonial Government to organize a Chinese police, taking upon himself and his coadjutors the whole responsibility of dealing with this peccant infiltration; and zealously enjoined them, in the language of honest Dogberry, but with better discrimination, "to comprehend all vagrom men." All convicts were handed over to the Colonial authority, which reserved to itself the right to inflict the punishments—usually deportation or the chain-gang; and thus the Celestial community was, and is, kept thoroughly weeded of all dissolute and dangerous members, and its unimpeachably good general character vindicated and maintained. This chain-gang, numbering in the neighborhood of two hundred, labors for the public benefit on roads, bridges, government buildings, etc., etc., and may be observed any fine day in Manila or its environs in scattered sections of twenty to fifty strong; or the ear may detect their proximity behind some high wall or in some building or yard by the melancholy, unceasing clank of the fetters which link them together. A group of these wretches is worthy of study. One of the first peculiarities the observer notes is the almost invariable presence of the "Tartar-eye," i. e., the oblique opening of the lids of that organ, which, notwithstanding the popular belief to the contrary, is rarely seen, and then but faintly marked, on the intelligent brow of the *real* Chinese, with whom it is the sign of unrefined Tartar blood, and held to be but few removes from savagism; *maugre* the fact that their Mantchoorian derived imperial dynasty bears it in typical perfection.

* The "Martial City of the South."

This chain-gang embracing all the convicts ever publicly seen about the capital, travelers, who fail to use their tongues, are apt to conclude that, with the exception of a weekly or fortnightly native malefactor or two, "worked off" on the Calisada by the *garotte*, during the morning early to the braying of martial music, countermarching of regiments of foot, and powdering hand-gallop of cavalry, and general display before the eyes of the dusky million of the grand things military,—the only bad characters ever known in this happy land are Chinamen. But the "inquiring genius" is not long in discovering that the Philippine Government maintains on the south side of Mindanao, in the Straits of Basilan, a penal station, named *Samboangan* or *Zamboangan*, the population of which is over eight thousand, guarded by a fortress on land and gunboats by sea, leaving open, however, one outlet, that which leads to the vast unknown interior, swarming with savages of the Igorrota type, but more dreadful, whom the Spaniards significantly call *Moros*. Thither are sent all culprits not of the Mongolian race.

WALKING.

AS a nation we love to ride. Steam cars, horse cars, and all sorts of vehicles have quite taken us off our feet. Old men lead and young men follow, in patronizing fast horses and fast hobbies. Both in a moral and physical sense we need to do more walking. In the city, after attempting to swallow both a breakfast and the morning news, a rush is made for the cars. After waiting for them at the street corner and getting chilled, the only place left is standing room on the outside platform. Having thawed out by the hot office register, work is pushed at express speed until it is time to take the cars for home. This ride morning and evening is robbing many of one of the best sources of life and happiness. Try walking. The first few days the muscles may feel a little sore but that will soon give place to greater strength. Instead of a chill freezing the feet and hands, the blood will circulate warmly through every part of the body, and dyspeptic symptoms will vanish before half a dozen blocks are passed. Do not walk as if the police were after you. Keep both eyes open and enjoy the morning kaleidoscope of human

life that is always to be seen on the streets of the city. If possible, manage to meet some pleasant companion with whom you can interchange thoughts on the topics of the day. Walking and talking go well together.

As the result of this morning and evening pedestrian exercise, a glow of health would be seen where now the cheek is pale and sunken, the lungs would expand and the heart grow cheery under the tonic of an abundance of good fresh air. Are you ashamed to walk? The best men in the city are not.

The poet-editor, Bryant, in the enjoyment of a hale and hearty old age, some time since gave the reasons to which he attributed his uniform health; prominent among them was his daily walk, in all sorts of weather, between his home and place of business. In traveling for pleasure and improvement, both at home and abroad, we ought to walk more. Two neighbors attempt the grand tour of Europe in two or three months; the one who gets home the soonest congratulates himself on having completed the trip a week in advance of his friend. Very little idea can be formed of a country from the windows of a flying express train, especially after a night passed in a sleeping car. Give up large plans of visiting every spot of interest in the country within a vacation of a month, buy a knapsack and staff and examine some particular points with leisurely care. What you see on

foot does not fade out of the memory like the dream of a night. The enjoyment of travel is never measured by the number of miles passed over or places visited. The best lessons and thoughts are lost and distracted by a multitude of half-seen pictures. In the country nothing can take the place of walking. A man on his feet is free. He can do as he wishes about keeping the beaten highway. Instead of going round the mountain he can climb its sides and examine the rocks, with the mosses and ferns and flowers, which always grow most beautifully in such places. Rest can be taken at any time, best of all at the summit. People who ride in the valley have faint conceptions of the views enjoyed by those who see the long trail of smoke left in the wake of the swift-flying engine which hurries on its way far below. When old age comes, and the stiffened limbs refuse to do us service, we can afford to ride; but a young man, in vigorous health, ought to take more pride in good walking powers than in owning fast horses. The one insures firm health and strength, the other often leads to fast living on the road that ends in moral and physical ruin.

[If one reside three, five, or ten miles from his place of business, he must necessarily ride. But we grant more walking than is the custom would prove economical, healthful, instructive, and promotive of long life.—ED.]

Department of Religion and Psychology.

Know,
Without or star, or angel, for their guide,
Who worships God shall find him.—*Young's Night Thoughts.*
The soul, the mother of deep fears, of high hopes infinite;
Of glorious dreams, mysterious tears, of sleepless inner sight.—*Mrs. Hemans.*

PREACHERS AND PREACHING.

HENRY WARD BEECHER ON THE STUDY OF HUMAN NATURE AS AN INDISPENSABLE ELEMENT.

(FROM THE FOURTH SERMON BEFORE THE SCHOOL OF DIVINITY AT YALE COLLEGE.)

MY impression is that preachers are quite as well acquainted with human nature as the average of well-informed citizens, but far less than lawyers, or merchants, or teachers, or especially politicians. I mean that, taking our American clergy generally in their practical relations with society, while on the one hand they have shown themselves to be shrewd, discreet, and sagacious—and if their separate

functions had lain in the conduct of affairs socially, there would be but little to be criticized on the whole—yet as preachers they stand off toward the bottom of the list among students of human nature. I think that our profession is in danger, and in great danger, of going under, and of working effectively only among the relatively less informed and intelligent of the community; of being borne with

in a kind of contemptuous charity, or altogether neglected, by the men of culture who have been strongly developed on their moral side—not their moral side as connected with revealed religion, but as connected rather with human knowledge and worldly wisdom.

THE BIBLE NOT ENOUGH.

But I am asked "Have we not in the truth, as it has been revealed in Jesus Christ, everything that is needed? If a man take the gospels and the life and sayings of the Lord Jesus Christ and preach these, is he not thoroughly furnished to every good work, and does he need to go outside of the Bible?" Yes, he does; for no man can take the inside of the Bible if he does not know how to take the outside. The kingdom of God and of truth, as it is laid down in the New Testament, is a kingdom of seeds. They have been sown abroad, and have been growing and developing in the world; and, whereas, when they were initiated they were but seminal forms, now they have spread like the banyan tree. And shall I go back and talk about acorns after I have learned about oaks? Shall I undertake to say that the infinite truth that is in Jesus Christ is, all of it, comprised in the brief and fragmentary histories that are contained in the four Evangelists; that human life has been nothing; that there is no Providence or inspiration in the working of God's truth among mankind; no purposed connection between the history of the world for eighteen hundred years, vitalized by the presence of the Holy Ghost, and those truths in the New Testament? All that Christianity has produced is a part of Christianity. All that has been evolved in human existence you shall find as germ-forms in the Bible; but you must not shut yourself up to these germ-forms, with stupid reverence merely for the literal text of the gospel. It is the gospel alive—the gospel as it has been made victorious in its actual conflict with man's lower nature, that you are to preach.

THE MODERN PREACHER WISER THAN THE APOSTLES.

It is said, "Are we wiser than the apostles were?" I hope so. I should be ashamed if we were not. "Are we better preachers than they were?" Yes, we ought to be better preachers in our time than they would be. They were adapted to their times admirably; but I think it would be as much a misappropriation of things to have brought down the arguments of the apostles from Jerusalem to our times, as it would be to carry up all the scientific knowledge and all the developed political economy

which we now have to preach them in old Jerusalem within the Temple. We should be barbarians to them, and they would be comparative barbarians to us. Adaptation to the times in which we live, is the law of Providence. The apostles were adapted to their times. We must be similarly adapted—not in a passive, servile way, but in a living, active way, and by taking an interest in the things which men do now. What did the apostles preach? Did they not preach like Jews to Jews, and Greeks to Greeks? They had liberty, and they took the things they found to be needful in their time to the people to whom they ministered. The following of the apostolic example is not to pursue blindly their external forms, but to follow the light of their humanity and that of the Gospel. It is said by some, "Has not Christianity been preached by plain men, who did not understand so very much about human nature, in every age of the world?" It has; and what has eighteen hundred years to show for it? To-day

THREE-FOURTHS OF THE GLOBE ARE HEATHEN, or but semi-civilized. After eighteen hundred years of preaching of the faith, under the inspiration of the living Spirit of God, how far has Christianity gone in the amelioration of the condition of the race? I think that one of the most humiliating things that can be contemplated, and one of the things most savory to the skeptical, and which seems the most likely to infuse a skeptical spirit into men, is to look at the pretensions of the men who boast of the progress of their work, and then to look at their performances. I concede that there has been a great deal done, and there has been a great deal of preparation for more; but I say that the torpors, the vast retrocessions, the long lethargic periods, and the wide degeneration of Christianity into a kind of ritualistic mummery and conventional usage, show very plainly that the past history of preaching Christianity is not to be our model. We must find a better mode of administration.

DIVINE AND HUMAN.

We need to study human nature, in the first place, because it is the divine nature which we are to interpret to men. Divine attribute corresponds to our idea of human faculty. The terms are analogous. You can not interpret the divine nature except through some knowledge of human nature. There are those who believe that God transcends men, not simply in quality and magnitude, but in kind. Without undertaking to confirm or deny this, I say

that the only part of the divine nature that we can understand is that part which corresponds to ourselves, and that all which lies outside of what we can recognize is something that never can be interpreted by us. It is not within our reach. Whatever it may be, therefore, of God that by searching we can find out, all that we interpret, and all that we can bring, in its moral influence, to bear upon men, is in its study but a higher form of mental philosophy. But, again, the fundamental doctrine on which our labors stand is the need of the transformation of man's nature by the Divine Spirit. This is altogether a question of psychology. The old theological way of stating man's sinfulness, namely,

TOTAL DEPRAVITY,

was so gross and so indiscriminating, and was so full of endless misapprehensions that it has largely dropped out of use. Men no longer are accustomed, I think, to use that term as once they did. That all men are sinful is taught; but "what is meant by 'sinful'?" is the question which immediately comes back. Instantly the schools begin to discuss it. Is it a state of the fiber of the substance of the soul? Is it any aberration, any excess, any disproportion of natural elements? Wherein does the fault lie? What is it? The moment you discuss this, you are discussing human nature. It is the mind you are discussing. In order to know what is an aberration you must know what is normal. In order to know what is in excess you must know what is the true measure. Who can tell whether a man is selfish unless he knows what is benevolent? Who can tell whether a man has departed from the correct idea unless he has some conception of that idea? The very foundation on which you stand to-day necessitates knowledge of man as its chief basis.

THEOLOGY DOES NOT MAKE A MINISTER.

A man who would minister to a diseased body must have an accurate knowledge of the organs, and of the whole structure of the body, in a sanitary condition. We oblige our physicians to know anatomy and physiology. We oblige them to study morbid anatomy as well as normal conditions. We say that no man is prepared to practice without this knowledge, and the law interferes, or does as far as it can, to compel it. Now, shall a man know how to administer to that which is a thousand times more subtle and important than the body, and which is the exquisite blossom of the highest development and perfection of the human system, namely, the mind in its modern develop-

ment—shall a man assume to deal with that, and raise and stimulate it, being ignorant of its nature? A man may know the Bible from Genesis to Revelation; he may know every theological treatise from the day of Augustine to the day of Dr. Taylor; and if he does not understand human nature, he is not fit to preach.

PREACHERS BEHINDHAND.

There is another consideration that we can not blink, and that is that we are in danger of having the intelligent part of society go past us. The study of human nature is not going to be left in the hands of the church or the ministry. It is going to be a part of every system of liberal education, and will be pursued on a scientific basis. There is being now applied among scientists a greater amount of real, searching, discriminating thought, tentative and experimental, to the whole structure and functions of man and the method of the development of mental force, than ever has been expended upon it in the whole history of the world put together. More men are studying it, and they are coming to results, and these results are starting, directly or indirectly, a certain kind of public thought and feeling. In religion, the psychological school of mental philosophers are not going to run in the old grooves of Christian doctrine. They are not going to hold the same generic ideas respecting men; and if ministers do not make their theological systems conform to facts as they are—if they do not recognize what men are studying, the time will not be far distant when the pulpit will be like the voice crying in the wilderness. And it will not be "Prepare the way of the Lord" either. This work is going to be done. The providence of God is rolling forward a spirit of investigation that Christian ministers must meet and join. There is no class of people upon earth who can less afford to let truth run ahead of them than Christian ministers. You can not wrap yourselves in professional mystery, for the glory of the Lord is such that it is preached with power throughout all the length and breadth of the world by these investigators of His wondrous creation. You can not go back and become an apostle of the dead past, driveling after ceremonies, and letting the world do the thinking and studying. There must be a new spirit infused into the ministry.

IS BEECHER A MATERIALIST?

With this general statement of the necessity of the study of the human nature and mind in its structure and functions, I will pass on to

the next point, which is the way in which this study is to be prosecuted. How are we going about it? In the first place, you must study facts scientifically. I think that such works as Bain's, while criticisable in many directions, nevertheless are works of very great interest as showing a wise tendency in the investigation of the mind of man—the founding of mental philosophy upon physiology. I do not commend the system in all its particulars, but I speak of its tendency, which is in the right direction. I would say the same also of Herbert Spencer's works. There is much in him that I believe will be found sovereign and noble in the final account of truth, when our knowledge of it is rounded up. There was never a field of wheat that ripened which did not have a good deal of straw and husk with it. I doubt not that Herbert Spencer will have much straw and husk that will need to be burned. Nevertheless, the direction he is moving in is a wise one, which is the study of human nature—of the totality of man.

THE BRAIN THE ORGAN OF MIND.

It was believed once that man did not think by the brain. I believe that notion has gone by. Most men now admit that the brain is the organ of the mind. It is held that it can not be partitioned off into provinces, and that there are no external indications of its various functions. I shall not dispute that

question with you. It is now generally conceded that there is an organization, which we call the nervous system, in the human body, to which belong the functions of emotion, intelligence, and sensation, and that that is connected intimately with the whole circulation of the blood, with the condition of the blood as affected by the liver and by aeration in the lungs; that the manufacture of the blood is dependent upon the stomach; so a man is what he is, not in one part or another, but all over; one part is intimately connected with the other, from the animal stomach to the throbbing brain; and when a man thinks, he thinks the whole trunk through. Man's power comes from the generating forces that are in him—namely, the digestion of nutritious food into vitalized blood, made fine by oxygenation; an organization by which that blood has free course to flow and be glorified; a neck that will allow the blood to run up and down easily; a brain properly organized and balanced; the whole system so compounded as to have susceptibilities and recuperative force; immense energy to generate resources, and facility to give them out—all these elements go to determine what a man's working power is. And shall a man undertake to study human nature, every thing depending upon his knowledge of it, and not study the prime conditions under which human nature must exist?

GOD HELP ME!

BY BELLA FRENCH.

Alone life's dark and thorny path
We wander oft, 'mid tempest's wrath,
While darker, darker grows the sky,
And from our souls goes up this cry:
"God help me!"

Sometimes a flower sprang to bloom,
Dispelling by its light the gloom;
And then our anxious soul would say:
"Should some one take my flower away,
God help me!"

But when the rude blast wildly blew,
And crushed the fragile thing that grew,
Whose tendrils, twining 'round the heart,
So nearly seemed of it a part,
God help me!

That losing it seemed losing all;
When torn away we saw it fall,
And knew too well that it must die,
Oh! then went up that wild, wild cry
"God help me!"

Of times a cruel, stinging blow
Laid every hope we cherished low;

And as above the dead we bent,
Again our lips that wild cry sent:
"God help me!"

Temptation oft allures us out
Into the realms of sin and doubt,
Until, at last, we lose our way,
And cry amid the shadows gray:
"God help me!"

Is Heaven so far from earth and me,
He can not hear or does not see?
If so, oh! angels take my prayer,
And lay it on the altar there—
"God help me!"

Alas! how many souls like mine,
Upon whose path few sunrays shine,
To whom the beacon light is dim,
There are who cry aloud to Him:
"God help me!"

Oh! would that I might bring a ray
Of light to some one's dreary way!
If such a work to me is given,
Oh! angels bear my prayer to Heaven:
"God help me!"

SPRING VALLEY, MINN.



NEW YORK,
JUNE, 1872.

END OF THE FIFTY-FOURTH VOLUME.
—With the present June number the Fifty-Fourth Volume is completed. With the next (July number) the Fifty-Fifth Volume of the PHRENOLOGICAL JOURNAL AND LIFE ILLUSTRATED will be commenced.

Subscriptions terminating now may be renewed at once, and the chain of yearly numbers completed.

A JUBILEE NUMBER!—The number for July will be rich in all respects; reading matter of the most interesting and useful sort, portraits of many leading statesmen, a dozen or more, with music suited to the occasion of our national holiday, and all things to match. The July number will speak for itself. Newsmen and agents who wish for extra copies should order early.

WHAT CAN I DO BEST?

THERE is no question which concerns parents more than that relating to the choice of pursuits for their sons and daughters. The same is true of young men who are dependent on their own resources, and who, instead of ascertaining by the rules of science what they are or what they may become, simply drift along like a floating log in a river, and, like the log which, when it comes to a shallow place, sticks in the mud and becomes an ugly "snag," to sink steamers or other craft which may happen to pass that way, these human sticks-in-the-mud become clogs to the progress of the race. There are many thousands of them strong-armed and with good intentions floating down the stream or out on the sea hither and thither with the wind or tide, drifting first upon one shore then upon another, a little while here and a little while there, without accomplishing anything.

Philanthropists establish institutions to fit young men for the ministry, for medicine, or the law, and among such we often find only bungling instead of method, competence, or science. A thick-thumbed, big-fisted boxer or butcher is sometimes put in training for the high office of spiritual guide or mediator between men and their Maker; having no fitness for the work, his energies and sympathies incline him to the world and to worldly affairs; he may, parrot-like, be taught to imitate and even to preach according to the chosen creed, but what a fist he makes of it! As a bushwhacker, ox-team driver, blacksmith, a maker of steam engines or locomotives, a hewer of wood or a drawer of water, he would be in his element; but how sadly out of place in the pulpit! Another instance: here is a delicately-constituted, effeminate young man (his mother's son) who is advised, because of his delicacy, to adopt some sedentary, literary, or artistic pursuit for which he has no particular taste or adaptation, and he takes up the easel and the brush with the hope of making an artist of himself. His spirit is among fruits, flowers, and crops, in the garden or on the farm; he delights in planting and in trimming trees, in grafting and training shrubs and vines; all his vacations are spent in the country, where he revels in out-of-door exercises. In this case a good fruit-grower or nursery man would be spoiled to make a poor or indifferent artist.

This is the way of the world to-day, and is one reason why there are so many failures among men. Careful observation on the part of sensible parents for the purpose of learning the tendencies of their children's minds, would enable them to make a more sensible choice than can be made by children. The highest aspiration of a bright youth of a dozen years may be to drive a team of horses; he considers a stage-driver a great man,

and almost envies him. A little later in life he outgrows such a desire, and would choose more wisely and something very different.

Now, if we are not greatly in error, it may be *pre-determined* as to what particular pursuits John, Charles, James, and Robert may each engage in, with every assurance of reasonable success. How? Examine them carefully; learn what their peculiarities are. One has all the faculties necessary for a first-class mechanic; another, for an artist; another, for scientific pursuits, and would excel in medicine or surgery; another, for literature or authorship, and another for the farm. One delights in horses, cattle, sheep, pigs, and poultry; another prefers fruits and flowers. One would become a navigator, explorer, shipper,—delights to be among sailors. Let him be *educated* for the sea. Why educated? So that he may rise and become midshipman, mate, and captain. To those who can read character as others read print, it is easy to determine what each and every one can do best. Nor is it necessary that a person become a professional delineator of character to “put the right boy in the right place.” It may be done by one having only a *general* knowledge of Phrenology—by one who can judge of the different-shaped heads. One has a long and high head: he should engage in something literary, scientific, or professional. Another has a head which is short, low, and broad: he will do best in heavy work—in building railways, bridges, fortifications, and the like. One best adapted for the slaughter-house would be quite out of place in the pulpit, and *vice versa*.

A merchant has one cast of brain and mind, while a mechanic has another. A composer of music would not be content—would be out of place—in laying stone walls or in digging ditches. A good teacher can do better than labor

at scrubbing; and a trained statesman need not become or remain a stable-boy. It is right and proper for each and every human being to become *all* his Maker intended him to be. Aspiration for improvement and promotion is a worthy sentiment. Let each of us, therefore, find out what we can do best, and fit ourselves as best we may for the greatest usefulness, the greatest success, and the greatest happiness which it may be possible for us to attain, and God will bless us just in proportion to our real deserts.

THE SHAKERS. — HAVE THEY MADE A MISTAKE?

DID Ann Lee, the founder of Shakerism, teach CELIBACY? or did she simply teach CHASTITY? We ask the question in all sincerity and in the interest of truth. If it shall on fullest investigation be made to appear that our excellent fellow-citizens, who take no part in our civil government, have, through zeal for an idea or a principle, carried their doctrines to extremes quite beyond any notions entertained by the founder, so much so, indeed, as to be off the track, then, like sensible people, they will revise and correct their creed in accordance with the evidence and such new light as may be shed on the subject. Among the thousand and more “man-made” religious creeds, by which societies are organized, it is highly probable that errors may be found, and that more light will induce their eradication or repeal. Creeds alone, no matter how old nor by how many accepted, are not saving ordinances. All things of human origin are imperfect and susceptible of improvement. Why not the Shakers’ creed?—the Quakers’ creed?—the Mormons’ creed?—and, indeed, *all* creeds? But at present we are looking into the doctrines, teachings, and practices of Ann Lee, who leads a few thousands by *her* creed. Who was Ann Lee? She was born in Manchester, England, in 1736, and died in Water-vliet, New York, in 1784, in the forty-fourth year of her age. Her father was a blacksmith, too poor to give his children even the rudiments of an education, and Ann was em-

ployed in a cotton factory. At maturity she married Abraham Stanley, a blacksmith, by whom she had four children, all of whom died in infancy. There were Quakers then, as now, in Manchester, some of whom became Shakers; and Ann united herself to them. Her health failed and she became emaciated and helpless. At this time she became spiritually illuminated; or, in other words, she had visions, as many large-headed, feeble-bodied persons do, and came to be regarded as "an inspired teacher." It is now a hundred years since she gave her testimony against "lustful gratification," which must have been something new at that time, for the civil authorities sent her to prison, where they kept her several weeks. This "capped the climax." For these persecutions, and in consequence of new visions which she had while imprisoned (Bunyan-like), she became a martyr, and was thenceforth called "Mother Ann." In 1774, Ann Lee, with a few others, including her husband, a brother, and a niece, came to America for the purpose of establishing here "The Church of Christ's Second Appearing." Here they sought employment. Poverty compelled them to separate for a time, Ann engaging in domestic service, nursing, etc. Later, the party reunited and took up their residence at Watervliet, Ann having previously separated from her husband. Ann now became what Spiritualists call a trance-speaker, and made many converts to Shakerism. New Lebanon was now established. The Shakers refusing to take the oath of allegiance, Ann, with others, was imprisoned, but soon released. Now, in 1781-3, Ann extended her ministrations into New England, where other societies were founded—one in Harvard, Mass. Returning to Watervliet she died in the forty-fourth year of her age. We have not found, we can not find, *anything* in history to warrant the inference that Ann Lee taught or practiced celibacy. It is true she was separated from her husband for a time, not because of any repugnance to wedlock, nor because of any religious impressions, but because she must "go out to work." While her husband pursued the avocation of an honest blacksmith, Ann went to work as a domestic and a nurse, to earn an honest living. Where is the authority to prove that she ever counseled

husbands and wives to separate that they might become Shakers? If she denounced the loose habits of society; if she poured out her holy wrath on lustful libertines, there can be no doubt that she was right, and that they deserved it. But she might as well counsel abstinence from water because somebody had been drowned in it; or that we should not use fire to cook our food because houses had been burned by it. No. Ann Lee was not so unwise as to ignore certain laws of God, by the transmission of which the race would soon cease to be. And she became what all women have a right to become, a wife and a mother.

Now, if our Shaker friends will only see the subject in this light, they will follow Ann Lee's example: take to themselves husbands and wives, and become the very best of citizens because pure and unperverted. By subduing the flesh to the spirit; by living lives of the severest chastity, they are all the better prepared to become the fathers and the mothers of a superior order of human beings.

In calling attention to this subject, we do so without the slightest prejudice. There are other creeds more or less faulty which also need revising in the light of science, philosophy, and revelation. The world is progressing. We repeat the question, shall it be CHASTITY? or shall it be CELIBACY? Have the Shakers made a mistake?

BOYS' LIBRARY.

BOYS like to read about Dr. Franklin; and we will mention here one of Dr. Franklin's peculiarities, which they will not fail to remember. He was very fond of reading good books, and when he was not able to buy them for himself he borrowed of his friends. When he came to be a man he not only became a book-maker and a publisher, but he founded libraries. There is one in Philadelphia, called the Apprentices' Library, and Dr. Franklin's statue, or a painting, used to be conspicuously displayed at its front.

If boys wish to become wise and great, very many of them can do so if they follow Dr. Franklin's example, namely: save their money and buy good books, and put the knowledge which they contain into their heads.

Our plan for the boys to get up a library for themselves is this: Let ten or twenty boys in a

school or neighborhood join, and put in ten or twenty cents apiece, and buy some excellent book, say the "Hand-Book for Home Improvement," or "Combe's Constitution of Man;" then let the boys meet, say five of them, at the home of one, and read the book aloud, each taking turns for twenty minutes, and thus spend the evenings until the book is completed. We have no doubt that the mothers and sisters of boys would be glad to hear such books read. When one section of the library company had finished the book, let it pass to another section.

Such a library company could send a request to publishers for a list of books with a stamp to pay return postage. The catalogue could be looked over, the titles and prices of the books considered, and the selections decided upon, and a new book be ordered as soon as one section of the proprietors of the boys' library had read the first book. At the end of a year the library might consist of twenty, thirty, or fifty volumes, all paid for, and owned by a score of intelligent, enterprising boys. Such library companies might be established, perhaps five or six in a township, and each company could exchange books with the other companies, so that all the boys in a town could read or hear read all the books owned by several library companies.

Reading aloud in company is an excellent training for the one who reads, and as each would take his turn, so all would get an equal benefit. Then if there were any mispronouncing of words, the hearers could correct the reader; and an unabridged dictionary should be at hand to refer to and settle any contested matter.

Boys *must do something!* They will spend their money, sometimes in rough and unmanly sports, in smoking, beer-drinking, or other vile habits. They attend negro-minstrel performances, circuses, play-houses, or other low forms of coarse and vulgar fun, and in many ways foolishly spend money which might be put into a library. We venture the opinion that the twenty boys who shall thus get up a library, and read it, and understand it, while all the rest of the boys in the place are managing as boys generally do, will become the leaders of that town, the members of Congress, the lawyers, the ministers, the judges, the model farmers, or the leading merchants.

If the boys of our country would adopt this plan of ten or twenty joining their little means together to buy a few good books, and then read them aloud together, we venture the opin-

ion that the standard of morals, intelligence, virtue, and power in our country would be more than doubled in a single generation.

Let there be such a library established wherever five boys can be found to co-operate; and it will not be long before five or fifteen other boys will come into the measure. What say the boys who read the PHRENOLOGICAL JOURNAL on this question?

OFFICE-SEEKING.

THERE are in every community, more or less, worthless persons very desirous of entering into the services of Uncle Samuel. They are, for the most part, comparative failures; that is to say, they have not succeeded in private affairs, and, therefore, seek public office that they may obtain support at the public expense. In plain English, they are willing to become a tax on the more industrious. Now, this is all wrong. Such "poor trash" is quite out of place in any place of trust or responsibility. Weak and shuffling in character, obtuse in intellect, oblique in morals, and more or less dissipated socially, they stink of whisky or tobacco, or of both, and are simply parasites or vampires. They gain positions of trust only to disgrace them, and to bring ruin on all who may be identified with them. What folly to trust them!

REMEDY.—Instead of permitting these self-seekers to fasten themselves upon the public, let the public *choose* whom they wish to serve them. Of course they will choose—not their shiftless cousins, but those most capable of filling the places most creditably. This is what every private citizen employer would do when seeking help. The public has been careless and negligent in this matter of choosing its servants, and hence the defalcations, swindlings, robberies, and thefts in so many of the public departments. Now, "we, the people," propose, in future, to choose such intelligent and trusty persons *to serve us* as we think best. We will not have those who seek office when we can have those whom we prefer. A little less "yaup" and a little more modesty will better become those who have fattened on ill-gotten gains at the public crib. Keep back the hungry office-seekers and give the people a chance to choose whom they want.

INSTRUCTION IN CHARACTER READING.

WE have been instructing students for a number of years in the science and art of reading character by means of Phrenology and Physiology. Our desire is to supply the great demand for lecturers throughout the country. Our next class will be opened in connection with our office in New York on the 13th of November next. Those who wish to learn or to understand the stranger at first sight, to measure men according to their true worth, and to aid them in business and especially in professional life, and those who desire to make Phrenology a profession—than which there is

none more honorable or more useful—will have the opportunity for becoming members of our November class.

Our study and practice in this department for more than a third of a century qualifies us to impart to students a fund of information which it would take them many years to acquire in other ways, and to place them in the field with a training equal to many years' practice. Those who feel an interest in looking into the subject, or who desire to become teachers in this great field, may obtain full particulars as to the course of instructions by sending for a circular entitled "Professional Instruction in Practical Phrenology." Please address this office, with stamp.

CARBON AND ITS DIFFERENT FORMS: DIAMOND—GRAPHITE—COAL.

BY M. M. W.

AMONG the elements and compounds known to the early students there were not a few that seemed most suitably named *ghaiats* or ghosts. Lacking all appreciable properties for sense, yet mighty in their operations and subtle in their influences, what wonder that the old alchemist could work only under the sign of the cross—that emblem of the only power that either for faith or superstition can put down the spirits of the nether world! From the very nothingness of nothing there seemed to arise agents of destruction, or most salutary compounds; and ignorance, being always the progenitor of the absurdly marvelous, is equally active in furnishing unknown and unexplored regions with improbable or impossible existences. Yet the monstrosities of the not-so-very-long-ago past are worthy of much charity, predicated as it can be now upon an enlightened intelligence; and a further disposition to be kindly considerate may be promoted by the remembrance that some of the most useful discoveries have been the result of the weird and superstitious manipulations of the early laborers in the frontiers of the unexplored realms of science.

But not always did the invisible ghaist hold supreme power; ever and anon, a spirit of more tangible form was courted for its charms, or feared for its power, and to one of these we propose to devote a little time, just now. Behold an existence of more than

ordinary capacities! Now floating through the air in the lightness of the smoke-cloud; now pressing with a crushing weight to the very heart of mother-earth; now closely bound to some of its affinities, giving health and delight to a world of recipients; again, combining to torment or destroy the victims of its presence; here circulating in dark veins through the whole body of a continent; there sparkling with crystalline glory in the tiniest morsels of the river's bed; one moment black and unattractive in the scullion's hand, the next bright and dazzling on beauty's brow; here repeating to us by vivid pictures the story of the life of earth ere human hearts began to throb; there waiting for human hands to use it for transmitting to the future the thoughts of human minds of the present; the poor man's friend, the rich man's wealth, the sinews of a country, the support of a nation, the force of a commerce, and the guardian of a state! Thus do we find the ubiquitous and all-potent *carbon*. It is a solid element, never found liquid or gaseous. With oxygen, hydrogen, and nitrogen it forms a number of gaseous compounds, and one of its important oxy-compounds may be compressed into a liquid; but of itself it is always a solid. It unites with oxygen, nitrogen, chlorine, and most of the metals, but its remarkable affinity for hydrogen under the influence of vitality produces a very important class of compounds, considered under physiological chemistry.

As oxygen is the great supporter of combustion, so carbon is the great combustible; yet it is only in its combinations that it is inflammable; under ordinary circumstances pure carbon is proof against fusion.

This element is known under three forms, all the same in constitution, yet widely different in specific properties. In its purest form it is a transparent crystal, called diamond; some change in the mere position of its particles, and it loses its crystalline properties and becomes the black graphite; or still another molecular modification, and it is coal. Now, these differing forms of the same substance have one common property: under the influence of heat, in connection with oxygen, they are all converted into carbonic acid gas. With the looser fibers of organic tissues, this is easily accomplished; the graphitic carbon requires a more intense heat for its change, while the diamond yields only to the extreme of artificial heat, and that, too, in an atmosphere of pure oxygen.

Carbon is so essentially an element of organic matter that the latest chemical writers class it beyond the bounds of the inorganic kingdom. A dried specimen of plant or animal is about one-half carbon, it being the very framework that upholds the vegetable organism in its strength and symmetry. However, it is not monopolized by the organic domain, for we find it abundant in the mineral carbonates, dissolved in rain, spring, and river waters, and existing in the atmosphere in the proportion of about one or two parts in every thousand of the mixture.

In considering the three forms of carbon (known as its allotropic conditions), we can not but marvel how, by reason of the marked differences of each, any one could ever have discovered their identity.

THE DIAMOND.

The value of the diamond as a precious jewel has long been appreciated, for we find it mentioned as one of the adornments of Aaron's breast-plate when his priestly vestments were instituted by Divine decree. From that time to this the diamond has been prized among the rarest ornaments or the richest wealth. Even the extravagancies of ancient alchemy have a parallel in the wild visions of brilliant wealth that emanate from the brain of the diamond-maker of to-day.

Diamonds are found in detached crystals among the river sands of India, Borneo, Siberia, and Brazil. In 1858 Brazil furnished 120,000 carats of diamonds. (A carat is about 3.5 grains, and named from a bean which was used for a weight by the old-time East Indian diamond merchants.)

The simplest form of the diamond crystal is octahedral, or having eight sides; but it *may* have twelve, twenty-four, or even forty-eight. When it is cut it is in parallel directions to the planes of these sides, or facets, a process known as cleavage.

The principle of cleavage has not long been understood. It is only a few years since Dr. Wollaston, an English chemist, availed himself of his superior knowledge, and thereby put into his pocket the sum of £1,250. A large diamond seemed valueless because of a flaw. He purchased it at a low price, and by observing the proper lines of cleavage, divided it into several smaller but perfect gems, which sold for much money, and proved the wisdom of his speculation.

The diamond is the hardest of all known substances. Its specific gravity is about 3.5, a fact that renders it easy of separation from the alluvial soil where it is found, by simply allowing a stream of water to pass over the whole. The current carries on the lighter sands, but the diamond grains sink to the bottom.

Its specific heat is represented by 1,192, but it has so great a capacity for conducting heat that this alone may serve to prove its identity among other substances that greatly resemble it. Its refracting power elicits the admiration of a world. It is not affected by any acid nor alkali—the glass-dissolving hydro-fluoric acid is as inert in the presence of the diamond as the neutral water; but “paste,” or imitation diamonds, vanish from sight upon the exhibition of this acid. Its combustibility was suspected in 1694, but it was Lavoisier, in 1776, who first *proved* that it might be burned, though only in pure oxygen.

Many theories as to the origin of this carbon-crystal have been offered, but all attempts to produce it from fusions or solutions have been, practically speaking, failures. That it is of organic origin can not be doubted; but whether it exuded as a gum from some pre-

Adamite forest-giant, or whether it crystallized from the succulent herbs of lesser growth, or whether it was the result of the evaporation of an unknown solvent, we can only surmise. Among carbon compounds the sulphide of carbon (sulphur and carbon), and chloroform (chlorine and carbon), are colorless, have great weight, and a high refractive power, rivaling the diamond's luster. But if an attempt be made to separate the sulphur or chlorine, hoping to have left the clear, crystallized carbon, the patient enthusiast is only rewarded by a few grains of charcoal! An experiment suggesting to every student that while he may strive with most laudable zeal to adorn his intellect by the brightest gems of scientific knowledge, he must never lose sight of the fact that all should be made subservient to the wants and necessities of his fellow-man.

While there is no doubt that in the remotest ages of Asiatic antiquity there were men who could cut and polish diamonds, it was not until 1456 that the art was known in Europe. Then Louis von Berquin, a Belgian of the city of Bruges, accidentally discovered that by rubbing two diamonds together a new facet could be produced. In 1650 Cardinal Mazarin introduced into France the brilliant form which is especially calculated to display the luster and refractive powers of the gem. It is only used for the largest crystals, and there is much loss in cutting. It has a flat surface on the top, and fifty-six or sixty-four facets on the sides, and below terminating in a point. The facet at the top is called the collet; and this is the only point that will transmit any light, all the rest being reflected or refracted by the facets according to their cutting, and displaying most beautifully the spectrum colors of the white ray.

The diamond seems to be indestructible by all natural agencies. The Koh-i-noor was discovered in 1550, and has lost none of its brilliancy nor transparency. It weighed at first 900 carats, but it has been cut twice, and since the last cutting, making it a brilliant, it weighs only 102 carats. It belongs to the crown jewels of England.

The finest diamond in the world is the Pitt diamond, now among the crown jewels of France. It was found in 1702, and was pur-

chased in the rough state by Mr. Pitt, Governor of the Indian province of Bencoolen. During the minority of Louis XV. it was purchased by the Regent Duke of Orleans for £135,000 (\$675,000). It weighed before cutting 410 carats, afterward 136. It is a brilliant of the "first water," and had neither flaw nor color. The chips and dust from its cutting were valued at £8,000 (\$40,000). In 1791 a commission of jewelers fixed its value at £480,000 (\$2,400,000).

The value of the diamond is enhanced by its perfect freedom from tint; yet when color is sufficient to make the gem a rarity it may give a fabulous worth. The most peculiar gem of this kind is the "Blue Diamond," owned by Mr. Hope. It is of a sapphire hue, one inch long and half an inch wide, and is valued at £30,000 (\$150,000).

Not only as an ornament is the diamond valued, but it is of great use in the scientific arts. The pivot holes of the finest watches are thus "jeweled," since the hardness of the gem better than anything else resists friction. Microscope lenses are made of it, and the "glazier's diamond" for cutting glass is a familiar object.

GRAPHITE.

Graphite, the second form of carbon, is also called plumbago, because it was first thought to be akin to lead; but though extensively used in the manufacture of lead-pencils, there is not a particle of this metal about it. Its name of graphite is from a Greek word, meaning to write, which is far more expressive. The substance is found in Germany, France, India, the Americas; but one of the oldest mines is that of Borrowdale, England, which was wrought during the reign of Queen Elizabeth. Graphite is of an iron-gray color, metallic luster, unctuous to the touch, a good electrical conductor, very infusible, and a specific gravity of 2.5. It undergoes no change in the air, and is thus much used as an ingredient of stove-polish. Its infusibility is manifest when paper, written over by "lead pencil," is thrown on a fire; the paper turns to ashes, while the words remain traced thereon in the lines of graphite. The points of resemblance to the diamond are its hardness, its infusibility, and the production of carbonic acid in oxygen.

COAL.

But the form of carbon that is of the greatest use, value, or interest to man is coal, a mixture of carbon with hydrogen, oxygen, sulphur, nitrogen, and some other materials in varying proportions. Coal is known to us under two forms: mineral or pit coal, and vegetable or charcoal. Charcoal is usually made from the non-resinous woods by burning them slowly, away from the air. It is a black, shapeless, insoluble, inodorous, insipid, opaque, brittle, porous substance—a good electrical conductor, but a bad conductor of heat. Its specific gravity is 1.7, but it floats upon water by reason of the air contained in its pores. It becomes a good disinfectant by virtue of high absorbing power—a fact utilized in a little invention called a “respirator,” used by those obliged to labor in poisonous atmospheres. The principle of the apparatus is applied by two folds of cloth between which is placed fine charcoal dust, the whole attached to a framework fitted over the mouth and nose.

Foul water may be rendered sweet and clear by causing it to pass through a filter of charcoal. Its preservative power is manifested in the long continuance of fence-posts charred at the end before planting; some grains of wheat charred eighteen hundred years ago at Herculaneum still retain their shape and general appearance. Lamp-black is the result of the imperfect combustion of resinous matters, and forms the basis of “printers’ ink.” To its indestructibility is due the persistence of printing after the paper shows the change and decay of time.

But it is the mineral coal that gives us the fullest value of this element, whether we be artists, artisans, students, or merely human beings. And with something like the emotion excited as we look over the manuscript-writings that have been preserved from generation to generation, and which portray the incidents and characters of the every-day life of the long-ago past, do we gaze upon a mass of coal, bearing as it does the imprint of the only life that existed in the day of its formation.

It is assumed that at a certain period in the world’s history, ere yet a human being had marked the soil with the impress of his foot or the culture of his hand,

natural conditions were such that vegetation was of a most luxuriant kind. The cooling of the molten mass of chaos had not yet fallen below a more than tropical heat, and the air was heavily charged with carbonic acid gas, the very nutriment of vegetation. Convulsive efforts of the seething center, and frequent electrical discharges from the clouds above, added yet other of the necessary aliment, while vapors dissolved and rains carried all to very mouths, or rootlets, that were ready to receive. Under these favorable conditions the humblest mosses of to-day were found as gigantic trees thirty or forty feet high.

But the primeval verdure was destined to change. Under the influence of moisture a kind of decomposition was established. The hydrogen and oxygen were driven off, and the heavy carbon sank to form the lower strata of a submerged region, and as the accumulation continued the pressure increased and the coal-seams of the present day were formed, holding, stored away in their black and massive structures, the brilliant sunbeams that had helped to feed and nurture the gigantic trees to maturity; sunbeams that never beamed upon a human face, but which were destined in a later period of the world’s history to gladden many a human heart; sunbeams that reared upon the silent earth more beautiful structures than fabled dome or fairy palace; sunbeams that wrought with magic power in their infancy, but which must at length yield to the disenchanting hand of science, and come forth from their rock-bound sepulchers in the very heart of earth, to turn to warmest, lightest day the cold and gloomy night that brooded over the minds and bodies of humanity. But time forbids a longer contemplation of this wonderful element; nor dare we even index its numerous compounds. Enough has been said to show that in it we have a subject teeming with interest, active for good, powerful for harm; an illustration in its artificial uses of the mighty power of intellect, and in its distributions and adaptations of the incomparable beneficence and supreme wisdom of Him who shaped all beauty by the motion of His thought, who created all light by the sound of His voice, who formed all life by the “breath of His nostrils.”

Department of Literature, Science, Education.

WHAT DO WE UNDERSTAND BY ADAM?

A SEQUEL TO THE "TRUE MEANING OF ADAM."

TO know the literal meaning of a word is one thing, but what we are to *understand* by it may be another; and to know this we must not only ascertain its origin, but the sense in which it is used in the text and context.

It is admitted without question that Adam means "man," but the common and almost universal idea is, that it means *a man—the first man*; but this is not correct. Its meaning, as has already been shown in a preceding article, is the collective man—the whole human family.

It is used, as Dr. Pye Smith says, "to denote man in the general and collective sense—mankind—the human race." It is not in the plural form, for "though there is no grammatical difficulty in the way of its being declined by the dual and plural terminations and the prominent suffixes, yet it never undergoes these changes." It is a noun of multitude conveying plurality of idea.* This the context abundantly proves. But it also has another meaning: it means *earth, ground, or clay*. Cruden says, Adam means "earthy, taken out of red earth;" and "Adamah, red earth;" "Adami, my man, red, earthy, human." And this the context also shows: "And the Lord God formed Adam, dust from the ground, Adamah." And it is added, "In the sweat of thy face shalt thou eat bread till thou return unto the ground; for out of it wast thou taken; for dust thou art, and unto dust shalt thou return." (Gen. iii. 19). Physiologically, therefore, Adam means the *generic*, or *earthy man*. But though this meaning is so obvious and certain, it has always been avoided, and it has been made to appear as if it meant a single or individual man; because it was so manifestly evident, that although it might be difficult enough to know how one of his ribs could be taken out when he was asleep and made into a woman, yet the difficulty would be rendered insurmountable if *all mankind* had been in such a sleep, and their sides opened, and a rib taken out of each, and built either into *one* woman or into as many women as there were ribs. And from what is subse-

quently said about the birth of Cain and Abel, it has seemed as if it must be that Adam and Eve were individual personages; they have therefore been made to appear as such. And all this has arisen because it is not seen or known that this whole history is *symbolical*; indeed, that it is necessarily so, not only because it relates events which occurred many hundred years before the historical times began, but also because it was written in the style which preceded the historical.

Every one who understands anything at all of the earliest modes of writing must know that the style was parabolic or allegorical, sometimes called *figurative*; i. e., that objects, persons, places, and things were used as types expressive of ideas and sentiments; and thus the natural image was really or factitiously the typical embodiment of that idea, and made to be the instrument for conveying it. It was this style that gave rise to fable, which is among the most ancient of all known modes of imparting instruction.

At first this style was unmixed, but in process of time its meaning also began to take cognizance of and include the outward signs themselves; for at first they were regarded as of so little account as not to be thought worthy of mention. Then, actually occurring events in the outward world became more or less intermingled with that more ancient or metaphorical style which, by means of symbolic natural imagery, related only to the things of the inward world, or world of mind. This was the ancient prophetic style; the books containing it, however, have long since been lost, although detached passages from them abound frequently in our existing Hebrew Scriptures, as the songs of Moses and Miriam (Ex. xv.); Balaam's parables (Num. xxiii and xxiv.); the song of Deborah and Barak (Judges v.); Jotham's parable of the trees going forth to choose a king (Judges ix.); the Cedar of Lebanon (Ezek. xxxi.), etc. The names of the books from which these extracts are made are not now known, although they manifestly belong to an antecedent age in which the symbolic style prevailed or preponderated.

* See Art. Adam, in Kitto's Cyclopedia.

But there are other selections made from some of those ancient records, the names of which are given; as in Josh. x., where the sun and the moon are said to stand still. "Is it not so written in the *Book of Jasher*?" (Sephir Ha Jasher). Also about David and Jonathan, from the same ancient book (2 Sam. i. 17, 18). A quotation is also made from one of the *Prophetic Enunciators* (Moshalim), in the Book of Numbers (chap. xxi.) And nearly the same words are used by the prophet Jeremiah (chap. xlviii.) And what was done in the Red Sea and in the Brooks of Arnon, it is said, is recounted in the *Book of the Wars of Jehovah* (Mileamoth Jehovah), Num. xxi. 14, etc. But as the style of the first chapters of Genesis is necessarily the most ancient of all, how is it possible to regard its language as literal or relating to historical events, when yet no people upon the earth had commenced the record of actually occurring events in the world of nature, nor did they till many hundreds of years afterward! In those early ages the outward objects in the natural world were used only as types or symbols by which to convey mental, religious, or spiritual truths. It was this mode of communicating ideas which gave rise not only to fable, allegory, metaphor, and poetry, but also to all the mythologies of India, Assyria, Egypt, Greece, Northern Europe, and all the Oriental world. The language of *fact*, i. e., of what we now call fact, which is a record and history of mundane things, is comparatively modern; it goes back from the present time only about 2,500 years, or to about the time of the building of Rome. All events of an earlier date are couched in the composite mythical imagery of the heroic or Mudikon age; and those of more remote times still, in the enigmatical symbols of Adelon. Indeed, "there is no evidence but traditionary of any fact whatever of profane history anterior to 600 years before the Christian era." * And sacred history runs parallel with it, both passing through a transition period. How, then, in the face of these facts, can it be assumed that the record in Gen. i. and ii. is one of personal, local, and historical event? It is as incredible as it is impossible. Indeed, it was not written by Moses at all, but copied, or compiled by him, from documents existing in his day in the libraries of Egypt, either in the later hieroglyphics or in the earlier symbolic characters. These documents, both Jehovistic and Elohim, as also the *Book of the Generations*,

says Gliddon, are believed to have been "transferred into Hebrew from a different character, probably symbolic writing."

The Hebrew letters and words are doubtless among some of the first modes of alphabetic writing, adopted from the demotic hieroglyphics, which accounts for those words having double meanings, a literal and symbolic one; thus RAH was not only the effulgence of the *natural*, but also the intellectual or *spiritual* sun; AOUR was not only *light*, but it was also *intelligence*; AB means *father*, and *will*, or *cause*; SHEM the heaven of the *mind* and the *natural* heaven; RUAH, not only *air* or *breath*, but also *spirit*; *soul* and *animal* were also denoted by the same word. And so ADAM means not only *earth*, but *man*, and this because by earth is signified man; i. e., it is the symbol denoting *man*, and therefore, at the same time, it is the expression of the symbol and of the thing symbolized. But it is only the first state of man in the order of his ascending life; that is, the *dust of the ground* or of the *earth, earthy*. The second state of man is of the heaven, heavenly, which is when God breathes into him the breath or the spirit of His life, and he becomes HA ADAM, the H being a breathing sound and one of the letters from the name of Jehovah. Man is then born from above, or by life from God. The application of this language to the new birth and growth of the human soul is not seen in the common translation of 1 Cor. xv. 47, which interpolates the word "the Lord." The passage reads, "The first man was from the ground, earthy; the second man is from heaven." But this earth and this breath, thus breathed in, were not themselves the things meant; they were only the *symbols* of them, as also of the order and process of man's spiritual generation or birth, or regeneration and new birth, whether of the individual or collective man, and denote how he is built up into an image and likeness of God. But, again, the sense of this is vitiated and destroyed by another interpolation, which helps to falsify the real meaning, by making it seem to relate to man simply as a *physical being* or to the formation of his *material body*. In the Acts (ch. xvii.) we read, "And hath made of one [or from one], all nations of men, for to dwell on the face of the earth." But the translators and some of the copyists, not satisfied with the words of the original text and their legitimate meaning, have introduced the word "*blood*," so as to materialize the sense, and confine its meaning to the physical body of one personal man

* Anc. Egypt.

as the progenitor of all the various races upon the earth. And no better reason is given for so doing than that it makes it to be in "unison with the Hebrew style of writing," and because it "denotes our natural descent from one common family;" i. e., it is so interpolated as to help to make it do so! (See Home's Introduction to the Holy Scriptures.) And this interpolation is not even acknowledged by the usual italics in our common version. But neither the Latin vulgate, nor the English of the Catholic translations has this word. (See the testimony which is presented on this subject in "Indigenous Races of the Earth," from page 588 to 595.) Still it may be objected that the word "one" is an adjective, and requires some noun for it to qualify, and why not "blood?" Because that word does not supply the true meaning, but materializes the idea of MAN; whereas the subject treated of is not man *physically*, as has already been shown, but man *psychologically* or *spiritually*, "and man became a *living soul*;" and the human soul is *not* made of blood, but it is made of the life from God, denoted by His breath or spirit being breathed into him; and God is that "one" life from which all men are created and live, it matters not whether all at one time or in one place, or at intervals of time and space; God is the one creating life—the one pattern or type from whom all alike live, and move, and have their being; He is the One Infinite Divine Prototypal Man, into whose image and likeness all finite men, whether of one race or many races, are alike created. And it is from this "One," or this One source of all being, that He hath made "all nations of men for to dwell on the face of the earth." And *Adam*, this generic type, was male and female (see Gen. i, 26, 27, 28). "Male and female created He them, and blessed them, and called *their name Adam* in the day when they were created" (Gen. v. 2). And the intellectual or male principle, represented by the man (*aiśh*), was as one with the affectional or female principle, represented by the woman (*iśha*); for what the one loved the other thought—they had no divided mind—it was the golden age!

In process of time self-love crept in, which begat coldness and indifference to others' welfare and happiness—a state of apathy and spiritual sleep, in which state division of interests and separation ensued. The principle of love, denoted by the woman, alienated itself from the principles and precepts of truth which had been implanted in the common life, and was enticed

and beguiled by the allurements of the senses, denoted by the symbol of the serpent, till all the higher and nobler qualities of the affections and thoughts of the human will, and of the human understanding, gradually succumbed to the seductions of the sensuous appetites and the lusts of the flesh, thus denoted by the serpent, or the serpent-woman; for "*Evia*, aspirated, signifies a female serpent"—the "serpent of our flesh"—and is as generic in its application as is the word "Adam." And in this falling, or degenerating state of our common humanity, there were conceived and generated and born mixed and perverted ideas of thought and feeling, which were symbolized by Cain and Abel, etc., in exact accordance with the manner in which, in those days, all ideas, and principles, and doctrines were communicated, and which were as well understood as they would be at this day, by being clothed in arbitrary and conventional terms, and by geometrical and fanciful marks, which we call letters and words. But to those who desire to know more on this subject, I beg to refer them to the explanations of the first, second, and third chapters of Genesis, in the "Two Great Books of Nature and Revelation," recently published, which enters into a much fuller and more copious explanation of this subject.

GEORGE FIELD.

CORPUS-CHRISTO-DAY IN GERMANY.

IN some of the remote portions of the land of wine and beer the celebration of the day of Corpus-Christo is kept up in a manner both original and interesting. The people in these parts are, to a large extent, the most orthodox of Roman Catholics, and hang to their traditional habits—often sacrificing comfort and pleasure. Being a rather strong-minded people, and encouraged in their religious exercises by the clergy, they never mistrust how much they lack of the real progress of the nineteenth century.

Early in the morning of the day of Corpus-Christo the rattling of all kinds of vehicles can be heard in the streets of the villages and cities, bringing to church the religious element of all the country around. They are dressed in their best holiday costumes; all carrying flowers or evergreens in their buttonholes, in their hands, or their hats. If they have any time to spare, they perhaps take a stroll through town to gaze at the different altars and other ornaments which have been erected in honor of the occasion by the inhabitants of the place, on each

one of the four sides of the public square which every village in Germany boasts. These altars consist of a sort of staircase, above which is to be seen, suspended from the wall of some house, a picture of the Virgin Mary with the infant Jesus in her arms. These altars are always tastefully ornamented with plenty of flowers strewn around them. They bear well-selected Scriptural mottoes, and through their imposing appearance have a great influence with the common, ignorant farmer or countryman, who is so strongly affected by shining pomp. Other houses are also decorated, and flowers are scattered all over the streets and walks.

The solemn tone of the holiday-bells (in Germany every church has several bells, each of which is named and designed for service on certain occasions) summons all to church, where mass and other ceremonies are celebrated. At about ten o'clock the church-doors are thrown wide open and the procession begins. To the tune of a dirge appear two boys; one carrying a carved crucifix, the other a magnificent brevier. Then follows the prelate of the diocese with majestic step; he is clothed in his costliest garb, and is surrounded by four choir-boys, each of whom carries a pole, on which rests a canopy. Next follows the choir, consisting of a number of school-boys dressed all alike in white sinners' (or repentance) shirts, and black velvet caps, carrying wax torches, the light of which, and their smell, cast over the whole affair an irresistible solemnity. Then come religious societies and prominent church-members, displaying banners, etc., and the people generally, all walking with dignified step and reverential countenance. The ground over

which the prelate and choir pass is covered with carpet. The procession halts in front of the first altar it meets; the choir sings a hymn; and after this the priest offers a prayer, during which all present kneel down on the hard pavement. This done, the procession is again taken up and the same ceremonies repeated in front of the other three altars, and this is kept up until the round has been made three times. Then they return to church, and after prayer and benediction by the priest the assembly disperses.

The antipathy which the uncultivated Catholic feels toward opponents of a different belief is marked on this occasion. One would pity the Jew who loses his way in the crowd during the progress of the procession. The Protestant who may happen to be a spectator is warned to retire or is driven away; or nettles are thrown into his hair, which he can not remove except by cutting off the hair in which the nettle has become involved. They regard it as the most punishable disrespect for an outsider to refuse the removal of his hat.

The spectacle which such an event presents, the writer must admit, is the most imposing which it has ever been his good fortune to witness. Imagine the music, the torches, the canopy, the richly-clad, ancient-appearing priest, the vast and solemn concourse of people in their holiday attires, the carpet, the flowers, the altars, the praying, singing and kneeling in the streets, smiled upon by the June sun, and you will have a faint idea of the real spectacle. There is romance enough in it to captivate even enlightened minds, and which is sure to win the devotion of ignorance. JULIUS ABEL.

PAUL B. DU CHAILLU.

THIS noted explorer, naturalist, and lecturer was born in Paris, France, in the year 1830, of a French father and Italian—probably Corsican—mother. Always fond of study, he graduated with honor at an early age from the "Polytechnique," a school founded by the Great Napoleon, and a monument to his fame worth a hundred Vendôme columns, and which, until the late European war, stood in the front rank of the world's educational institutions.

The father of Mr. Du Chaillu had been during a great portion of his life engaged as a trader on the African coast, near the mouth

of the Fernand Vaz, and soon after the son left the college, he was, for some act displeasing to his step-mother, banished by his father to that unpleasant locality. Here the young Du C. was accustomed to penetrate farther into the country in pursuit of ivory, etc., than any previous trader, and being an ardent lover of natural history, prosecuted that study at the same time.

Frequently these excursions were varied by canoe voyages along the coast. On one of these his canoe was upset during a sudden squall, and of all the crew he was the sole survivor. Cast upon a desert shore, without

food, gun, or compass, and almost destitute of clothes (for the fierce action of the waters had torn off the slight garments necessary in that climate), our forlorn traveler struggled through the thorny African jungle for two days and nights, in what he "guessed" to be the direction of the American missionary station at Gaboon, arriving there toward evening of the third day. Here he was most hospitably received by the Rev. James Leighton Wilson, attached to the A. B. C. F. M., and by him and his wife was attended through a severe fever, which Du Chaillu experienced as the result of his fearful exposures. The diseases of tropical climates are sharp and quick in action, but convalescence is often very slow.

During the months of his slow recovery he became convinced of the truth and beauty of the religion of his kind entertainers, and formally adopted it.

Some months after this, having accumulated a large stock of ivory and ebony, and a fine collection of stuffed birds and animals, he chartered a small vessel in which to send them all di-

rectly from the mouth of the Fernand Vaz to the United States, while he proceeded first to Paris to visit his father, and then to New York. The vessel by which he had sent his goods, and which he expected to find upon his arrival in America, was never heard from.

Before leaving Africa Mr. Du Chaillu had determined to become an American citizen; and now, having, in the loss of his cargo, been deprived of much of his fortune, he determined to employ the years that must intervene before he could obtain his naturalization papers in studying the English language (which he then spoke very imperfectly), and in teaching his native tongue. Armed with

a letter from the Rev. J. L. Wilson to Rev. Robert Baird, D.D., President of the American and Foreign Christian Union, he applied through the latter for a situation in some school, and was soon engaged as a teacher of French by the Rev. Gilbert Livingston, then in charge of a seminary in Carmel, Putnam County, N. Y. About three months after Mr. Du C.'s engagement with Mr. Livingston, the latter was removed by death, and during the remainder of the year many were the troubles consequent upon the disorganization existing in a school without any responsible head, and Mr. Du Chaillu as a foreigner was by no means agreeably situated, yet so conscientious was his course that

he won the respect of all; while his pupils loved him for his careful instructions, his merry disposition, and the liberality and strict impartiality with which he provided for their happiness. He was intolerant to none but the idle and the rude; with all others he was most kind, patient, and painstaking.

During this year Mr. Du Chaillu employed most of his hours after

classes in writing an account of his travels and discoveries in Central Africa; but this book, the result of so many years of exposure and days of patient toil, was destined never to see the light. No publisher would accept it, and its disappointed author burned it in disgust. Yet this work was probably fully as interesting as any of his later books which have enjoyed so large a sale.

At the close of this year Mr. Du Chaillu returned to France, and soon after, pecuniarily assisted by his father, resumed his explorations in Africa. The results of these, including the account of the discovery of the gorilla, were given to the public in the "Adventures and Explorations in Equatorial



Africa," a book which was accepted by the Harpers without difficulty, public attention having been drawn to the nearly unknown continent of Africa by the publication, during the years of Mr. Du Chaillu's absence, of the travels of Dr. Livingstone.

Since then, as all the world knows, Mr. Du Chaillu has made another journey into the wilds of Africa, mainly that he might bring to civilized nations positive proofs of the existence of the gorilla, which was denied by some of Europe's stilted scientists. Since his return from this tour of exploration, he has been before the American public and obtained their suffrages as a very entertaining lecturer, and a writer of books for children, which read like fairy tales, and are very popular. In private circles he is known as one of the firmest of friends and most

genial of men. During the last summer Mr. Du Chaillu spent much time in travel through Norway and Sweden, and recently left this country to resume his investigations in Scandinavian life; so we suppose we may expect soon another book from his racy and prolific pen.

Mr. Du Chaillu is of medium height, slimly built, but wiry and active. His well-exhibited Firmness and Self-Esteem give him character for independence, persistence, and self-reliance. He has a kindly nature, is thoughtful, and much of a contriver, especially in the way of methods for the prosecution of scientific investigation. His ambition, elasticity, and enterprise, rather than brawny strength and physical force, have contributed toward securing the success which he has achieved.

ON LIFE INSURANCE.—No. 1.

AFTER all that has been said or printed on the subject of Life Insurance, it remains a matter of deep mystery to a large number of intelligent people. It would appear that the idea that life insurance was beyond the comprehension of common people had been purposely kept up in former years; at least no special pains were taken to make it plain. Yet the principles upon which this science is founded are just as simple, and much more certain in results, than the principles upon which fire insurance is based. It shall be our object to treat this subject from a popular and common-sense standpoint, rather than to discuss any scientific or actuarial problems.

The precise origin of life insurance is, as Lord Dundreary observes, "one of those things that no fellow can find out." It seems to have been practised in some rude forms in the earlier part of the sixteenth century. The idea of mutual insurance was plainly hinted at, if not quite developed, in the ancient Saxon guilds. There were no data to speak of to go upon in those early days, and instead of a mathematical science, there was a blind betting on chances. In fact, "insurance wagers" of many absurd forms soon came to be practised with as much zest as any other game of chance. Not only were

insurances, so-called, made against all possible mishaps to person or property, but there were insurances against lying, against highwaymen, and against divorces! A scheme was started for the insurance of *female chastity*; and another, on which large sums were paid at Lloyds, on the success or failure of a young fellow who had undertaken for a wager to go to Lapland and bring back, within a given time, *two reindeer and two Lapland women*! He did it, and won the wager.

The foundation of life insurance, as a system, rests upon the ascertained law of mortality, or average death rate. It was long ago discovered that a certain law of average prevailed as to the number of deaths, the number of accidents, the number of suicides, the number of murders, etc. But statistics had to be gathered for many years and carefully studied before this law of average could be reduced to a system. Mortality tables were constructed by learned mathematicians, and these have been tested and modified by more than a hundred years' experience in English life companies, and upward of thirty years in our own, till the computation is reduced very nearly to the exactness of the multiplication table.

Take one thousand men, of a given age,

and we know that a certain number will die within a year; but it is impossible to make a selection, and say, "This man shall die: that man shall live." Nothing is more certain than this law of average as applied to the mass; nothing more uncertain as applied to the individual. Suppose all of this thousand men to be in good health, and each aged thirty-six years. The "expectation" is that all would live an average of thirty years longer; yet doubtless some would die within one year, and others might live to the age of ninety or a hundred. To insure each of those men \$1,000, payable at death, each should pay an annual sum sufficient, if judiciously invested, to amount to \$1,000 at the end of thirty years. That annual sum would represent the net cost of insurance, pure and simple. Add to it such per cent. as will cover the necessary cost of transacting the business, and you have the proper premium for that insurance. What a company would lose on those dying before the expiration of the thirty years, would be made up by those who lived longer than thirty years. There are many plans of life insurance; but, if sound, all are founded on this basis.

In computing tables of premiums, a low rate of interest is assumed—four per cent. in Massachusetts, four and a half per cent. in New York—so as to be safe from possible fluctuations in the income realized from investments. To this is added a percentage, varying from twenty to forty per cent., to cover the expenses of obtaining and transacting the business, such as salaries of officers, clerk hire, rent, commissions to agents, etc. This is called the "loading." Like other branches of business in trade or manufactures, money has to be expended freely to gain business. Few people go to life insurance offices and ask for insurance—they wait to have it urged upon them by an agent or solicitor. There are many companies all sharply competing with each other, and it is found necessary not only to educate people in the knowledge and benefits of life insurance, but much money is spent in advertising the particular advantages claimed by any one company and its plan over other companies and their plans.

Contrary to general practice in fire insurance, the great majority of life insurance cor-

porations are "mutual," so-called. The premiums of the members form the fund which pays all the losses and expenses, and piles up the reserve fund necessary to meet future liabilities. At the outset, therefore, there is only a guarantee capital, pledged by those who form the company; but as years pass on and the company grows old and successful, the fund increases like a rolling snowball till it becomes something enormous. Some of our oldest companies count assets of twenty to forty millions each. It should be remembered, however, that their liabilities increase in nearly equal ratio. Many people make the great mistake of counting the huge assets of the larger companies as "profits" of the business. They might with equal justice call the deposits in a savings bank "profits." The more policies in force, the greater is the sum at risk; and a certain prescribed proportion of the whole amount must constantly be kept on hand. This is called the reinsurance fund, or reserve.

The theory in a mutual company is, that each insurant becomes a member, and each has an equal interest and vote in controlling the management. But in actual practice, it is found that most of the mutual companies, so-called, have a small stock capital, and a few stockholders control the appointments, and therefore the management. And in a purely mutual company, the impracticability of getting together the thousands of policyholders widely scattered over the whole country, leaves the management in a board of trustees, whose control is even more absolute than that of a regularly appointed board of directors,—for they are not accountable to a small body of stockholders, vigilant to see that their rights are protected.

The mutual and the mixed companies charge a rate of premium considerably higher than the acknowledged cost of insurance for the alleged purpose of guarding against any unforeseen danger in the way of sweeping losses by epidemics. At the end of one, two, three, or four years, according to the varied practice of different companies, the unused portion or surplus premium is returned to the policy-holder as a "dividend," to be applied either in reducing the amount of his annual premium or to increase the amount of insurance. In estimating the value of

these dividends, the length of time for which the company had the use of and the interest upon this surplus premium, before returning it to the policy-holder, is an important element to be considered.

Formerly most of the companies collected fifty or sixty per cent. of the premium in cash, and took a note from the insured for the remaining forty or fifty per cent., secured by the policy itself, and bearing interest. A new note was given each year for the credit part of the premium, and the interest was collected annually on payment of the premium. It was expected that these notes were, eventually, to be wholly or in part canceled by the returns of surplus premium. But in actual experience it was often found impossible to meet the expectations of policy-holders in this direction, and it has been found best by a majority of the older and larger companies to require premiums to be paid all in cash, while the old and vexatious note system is fast going out of fashion.

In the stock companies the simpler plan is

adopted of "so much insurance for so much money." A capital is paid in by stockholders to make good all deficiencies and give additional security to policy-holders. No dividends or returns of surplus premium are promised by the company or expected by the insured; but the rates of premium are fixed at as nearly the net cost of insurance as the company thinks the business can be safely transacted, and they range from twenty to forty per cent. lower than the rates of the mutual companies. Under this plan the stockholders can expect no return for the use of their money for a term of years, the expense of first gaining the business being larger on the issue of new policies than on renewals of old policies; and the reserve for reinsurance fund accumulates more slowly. Yet that is an affair of the stockholders, and the insurant gets the benefit of a low premium and a definite contract.

In our next article we will speak of the extent of life insurance, attempted frauds upon life companies, etc.

CAN WE MOLD OUR FEATURES?

IT is not generally supposed that we have the power to produce changes, and to make improvements in our physical structures through the direct action of our minds upon the special features or organs which we may desire to improve. But there is every reason for believing that this high power is among the gifts from God to man; and in the constantly unfolding powers of the human mind it will yet, we maintain, manifest itself as one of its divinest forces.

The question, briefly put, is, have human beings *now* the power, or may they yet develop it, to change the physical conformation of an eye, a tooth, a hair, an ear, the nose, mouth, chin, or any other special part of the organism, to which they may long and intelligently direct the positive will-powers of their minds, with the full and *specific intent* of making such change; and can they, in making changes, take part with a higher beauty, a quicker and more manifest intelligence than it has before?

That this is a human power. It is assuming a great deal to claim that we have this power; but when we see the development, not only of

the human, but also of vegetable and animal existences, is the direct product of an internal creative principle, or *mind*, would not the work of building appear to be the legitimate office of all mind? There can be no doubt that every function of our organisms is now conducted by a secret mind within ourselves. From what source, let us inquire, but a mental one could the power be derived to carry on the operations of the body, such as the circulation of the blood, the digesting of the food, the removal of waste matter from the system, and, in fact, the performance of the whole animal economy? This part of the work of the system is just as palpably under the government of some sort of *mind* in us as are our emotions and sensations.

We have two kinds of mind: the one positive; the other passive. To the latter is assigned the duty of taking care of all of the lower work of the system. The blood is evidently circulated by an involuntary will in us; also, the other offices of the animal organism are conducted in the same manner. All of the lower operations of the system may now be controlled, to a certain extent, by the voluntary (as contradistinguished

from the *involuntary*) action of our minds. Thus we can either retard or accelerate, at will, the circulation of the blood; we can delay sleep beyond the natural or usual time. We can feed the stomach or starve it (just as it may suit us to do), in violation of and in *total* disregard of the laws of the involuntary will, which is always active in regulating our physical offices for us when our positive minds or wills do not interfere to prevent. The power, then, of our positive *minds* over these lower operations of the system is conclusive *evidence* that at all times those operations in us are conducted by a kindred *mind-force*, or else our positive wills could gain no power over them to check or to interfere with their operations. Conceding, then, that the entire animal economy is managed (and upon this point I presume there will be no dispute among scientific minds) by a kindred force of mind in us, lower than the positive mind which we use to execute our higher purposes, would it not appear reasonable that our higher mind would, after a while, include in its functions the molding and regulating of our features upon a higher plan than is now being done for us by our involuntary or passive mind?

But, in reply to this position, it may be said that the performance of the operations of the ordinary economy of the system (such as its supply and waste) by a mind-force — whether involuntary or otherwise — furnishes no evidence that the same mind has any lot or part in building the structure of the system. What, let us inquire, in reply to this, are these ordinary operations of the system but a building process? Evidently such is the use of the food we take into our systems; and the same force that removes the waste matter is also the force which is engaged in selecting the material which is to remain, and in dispensing it throughout the system. We think there can, on this point, be no doubt whatever. We know that changes in organic methods are all the time being made; and it seems to us that the next organic development for which we may look will be a positive control by our conscious minds over the work of our secret building minds in their processes of constructing or building the human body. I do not mean to say that our active minds will usurp the office of building. We know already that the positive mind has assumed a position of command over some of the involuntary operations, and we may reasonably expect that command to become more absolute, and to reach much further than it has yet done. Now, the

control extends little further than to delaying or hindering the operations of the building mind within us; viz., by forcibly postponing sleep beyond the regular time; by ordering the stomach, against the mandate of the building mind, to await the pleasure or the convenience of the positive mind before it shall receive food; and so on through a number of similar interferences. Occasionally the positive or external mind departs from this process of interference, and really assists the building mind in its work of reconstruction, after the system has sustained a severe check from disease or otherwise. Whenever this does occur, the work of regenerating the wasted system proceeds with great rapidity, and with an astonishing development of force; often so great as to attract the attention of friends, and to draw from them the remark that the late invalid (who may have passed through a most trying ordeal, and may have barely escaped death) "looks better than he ever did before in his life."

It is the proper office of the positive mind to *assist* the involuntary or building mind in all its operations. This evidently is the law. So plain is it that in such a case as the one cited above, the patient draws his increased life from the efforts which his external mind has made to assist the building mind in its work of repair, that we have a right to assume it as beyond question, and to use it as evidence of the principle for which we here contend; and if the positive mind can in such a case aid the building mind in recuperating the lost and wasted structure, may it not also assist nature in constructing the human organization in its initial stages, or in making alterations and improvements after the structure may have received the bulk of its growth? And to go further, can a man, after reaching the age of thirty-five, or fifty even, make material changes of himself through the action of his voluntary will, it being constantly and almost *ceaselessly* directed toward producing those changes? We think he can. One important fact tending to support this view is the generally acknowledged power of the mind to manifest itself through the features of the face. Upon our features we trace clearly the difference between intelligence and ignorance, and so estimate men as we meet them. Suppose a child of one year be placed among Chinese. At the age of twenty-five (notwithstanding his nationality the result will be the same) he will there present a very different appearance throughout his organism from what he would have done if, at one year old, he had been placed in the

midst of the refining influences of good society in England or America, and had remained there until he was twenty-five years old. In either case it would be quality and degree of culture alone which would make the difference in his personal appearance. Clearly would this exterior condition be due to the influence of the mind upon the organism of the supposed individual. The case is not an extreme one. Like things are occurring all the time. It often happens that a person loses his or her good looks by going from a cultivated community into a rough one, and there remaining for a long time in close intimacy with uneducated people. Many people have improved in personal appearance, and their features have strangely changed, so that perhaps they might not be recognized by former friends, after leaving a lower community and going into a more active, intelligent, and refined one. In these cases the work, it is true, does not appear to have been done through the intention of the mind. Has not a flattened nose been known to become more angular and elevated, a dull eye to become bright, as resulting from changed and improved surroundings? Now, if the mind can make such alterations in the character of our features without appearing even to be making an effort to do it, what should be the influence of the mind in the same direction where there is a full purpose to produce the changes? The differences in power between these two states of mind must be very great indeed.

If our minds are really capable of doing this sort of work, we think that we assume but little in saying that, in time, they will choose it as an employment of no small consequence; for we could scarcely, I imagine, be better employed than in making large personal improvements on ourselves. Nothing would be below our dignity which might tend to such a result.

The efforts which our minds would have to make in changing, by their intelligent and direct action upon our features, their original contour would not be ordinary, but most extraordinary. Light work would not, nor could not, accomplish such results. None, therefore, but the ambitious and the persevering need hope for any beneficial results from trivial efforts.

The ordinary mind would, of course, derive strength, in time, from the example of superior minds leading in that direction. It is a law

apparently that what the few learn first, afterward becomes the possession of the many.

We have made a point of this here, because we want to offer a crumb of comfort to the more indolent specimens of our race, who may feel that, through their inertness, they are denied all part in the benefits of the development promised the more active and ambitious.

The rocks, as we gaze upon their hard and unyielding faces, show to our external senses no signs of life; nor would we suspect that there were any if we did not see the flowers of the valley gather their brightest bloom and their sweetest odors from the disintegrations of these rigid and fixed structures of creation. Could the self-molding of the human features, even after they have gained their full size, be a greater mystery than this? In the one case, we would have the active forces of mind in its highest form to do the work. In the case of the flowers, the amount of intelligence which we accord is but small, and yet how beautifully do they perform their work! The power of mind over the whole human economy can not be doubted.

The mind has strayed very much away from its true mission. Its chief business evidently is to build up and to take care of the body. We are now exercising but one-half of the office, and that we are doing but imperfectly; for we



FIG. 1.—CUTTING DOWN.

can not, on the right principles, or under the right methods, take care of the body unless we couple with the task the other and first legiti-

mate office of the mind, which is, by the intelligent use of its will forces, to build the body, and to improve the structure of the features at



FIG. 2.—POINTING.

every stage of life. Behind this office for the mind lies a larger field of duty than we now conceive of; and in that duty is more of the true law of all the economies of life than we have yet found out. Error among us will be corrected in the proportion in which we may acquaint ourselves with the true offices of the mind. J. M. P.

A BAD PEN.

THE accompanying grotesque portraits are derived from German sources and exhibit the national cast of expression quite piquantly. The Germans are clever in their sketches of character; they appreciate keenly the grotesque in human nature. To be sure, there is not as much nervous action indicated as by the French caricaturists, but the humor has a solid, direct force. The German type of organization, too, is particularly evinced in their fondness for portraying the smaller incidents of every-day life. As a writer has said, they catch up and treat with a tact that is peculiarly their own "all sorts of themes, from a short-sighted and irascible husband whose wife has stolen his spectacles, to the manly backwoodsman whose

larder is invaded by some red Indians. These caricatures are not confined to one picture, but the misfortune of the unspectacled husband and the adventures of the squatter and his unwelcomed visitors are represented in a course of a dozen or more spirited sketches." In England and America we find the humoristic vein cropping out particularly in political lives,—in exhibiting the ridiculous phases of office-holding, it being quite immaterial to the artist whether the functionary burlesqued occupies a high or low position, his main object being to excite the risibles of those who may chance to see his production on the printed page. But there are times when the political humorist performs a most valuable office, where he assists in bringing about a work of reform in the politics of a municipality or city. Of this we have had a very marked exhibition in the recent developments of corruption in New York politics. While the more

manifest follies of fashionable life inspire the pencil of the English and French artists, the German, owing doubtless to a rather deep philosophical cast of mind, aided by a very

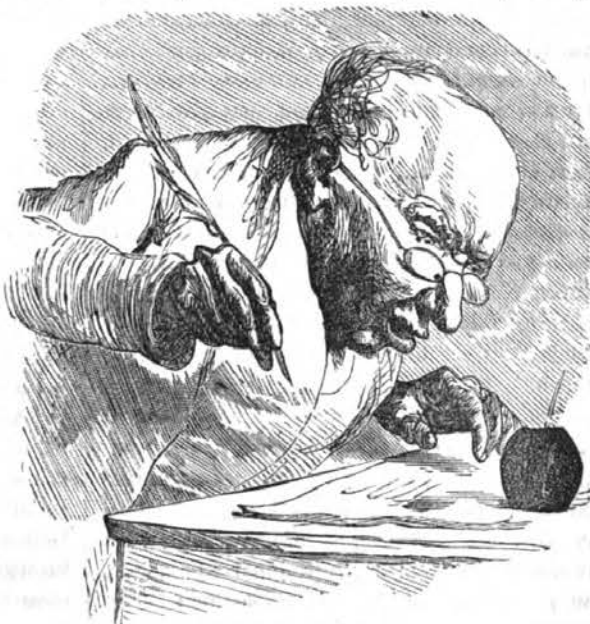


FIG. 3.—THE RESULT.

earnest social nature, is easily inspired by the annoyances of life in the home circle. Although he is disposed at times to look abroad,

yet he finds the most food for representation at home.

The subject which is illustrated in the sketches before the reader is "a bad pen," which the artist has treated in a most amusingly grotesque style. Here an old gentleman, probably some severe old doctor who has retained an early-imbibed prejudice against all new-fangled notions, and will persist in using the goose-quill of his youth, having found the nib of his pen too much worn for further convenient use,

sets vigorously to work to restore it to good condition. In the second portrait he is pointing and splitting the newly-made nib with all the interest of the closest attention. It is in this performance, as is well known, that an eye and a hand are especially requisite. Well, the pen is supposed to be ready for work. The old fellow has stocked it with ink, and in the third portrait we find the result of his attempt to write. A crisis has occurred, all his arduous labors have been in vain; an unsightly blot daubs the clean foolscap.

"SPIRITUALISM ANSWERED BY SCIENCE."

THE *Scientific American* says: "Mr. H. L. Hinton, 744 Broadway, N. Y., has issued the pamphlet entitled as above, written by the celebrated London barrister, Mr. Edward W. Cox, in which he gives expression to his views concerning spiritualism, or spirit manifestations, as deduced from the series of scientific experiments made last year in London, under the auspices of Dr. Crookes, Dr. Huggins, and others, Mr. Cox being one of the examining party. A description of some of these experiments, with drawings of the testing apparatus employed by Dr. Crookes, will be found in our back numbers.

"In the present work Mr. Cox describes the various forms of spirit manifestations that he has witnessed, from which it is evident that he has been a careful and extensive observer. He has become fully satisfied that intelligent noises or rappings are actually produced, that chairs, tables, or other objects are undoubtedly moved, and that the proofs of the reality of these demonstrations are just as absolute as are the proofs of any other fact in nature. The force by which these demonstrations are made, he calls psychic force. It may be indicative, he thinks, of the existence of a soul within man, and it is this soul which he thinks may exercise psychic force beyond the body. He rejects the idea that the manifestations are produced by the agency of disembodied spirits. They are purely and wholly the result of forces residing in the human organism, and neither our departed friends, angels, or devils have to do with them. The medium is never able to communicate anything that is not already known to some person present.

"This psychic force, Mr. Cox thinks, oper-

ates by a vibratory or wave-like action, is opposed to and capable of overcoming the attraction of gravitation. Tables and other objects that are moved are first filled, so to speak, with the psychic emanation, which renders them buoyant in the air, when they float, swing, and away about as if supported by an invisible balloon.

"One of the explanations of these phenomena, and upon which Mr. Cox lays much stress, is *the unconscious cerebral action of the mind of the medium*, which action is manifested through the psychic force. Now, as this unconscious cerebral action can be induced and made to set men's bodies in motion, without their knowing it, it becomes a question whether Mr. Cox himself and his friends did not have their cerebrums unconsciously excited so that they could hear noises and see sights that in reality never took place; or so that they could not see the person who pushed the piano, lifted the table, or forced down the balance.

"What Mr. Cox and Dr. Crookes now need, in order further to verify their published conclusions and observations, is a scientific apparatus so made as to indicate the true condition of their own cerebrums. An instrument that shall be capable of indicating the unconscious excitement or action of the mind, would be of great value in pathology. In addition to its uses in unraveling these 'spirit' mysteries, it would doubtless be of inestimable importance to physicians in the diagnosis and treatment of mental disorders and diseases that react upon the brain.

"There are various forms of unconscious cerebral action to which persons have been subject. To some individuals, visions and

spectral personages have appeared when they have been wide awake and in the full possession of their ordinary senses. Sir David Brewster mentions several examples of this kind of cerebral action.

"The latest phases of these psychic demonstrations, as brought out in this country, to wit, the visible production of the forms of departed friends, standing out clear and positive in the presence of the members of the psychic circle, have never been witnessed by Mr. Cox—at least he makes no mention thereof; nor does he allude to the spirit flames and lights now produced here. Mr. Cox should come over and visit Mrs. Mary Andrews, at Moravia, N. Y., who will show him things in this line that will probably make his hair stand on end. One visitor has assured us that the sight of these things brought on a cold perspiration, and he felt as if the gates of the eternal world had been actually thrown open. Until Mr. Cox goes to Moravia, it is evident that spiritualism will not be fully answered by science."

[These gentlemen are not willing to accept *PSYCHOLOGY*, the Science of the Soul, and so get a skylight view of things. They do not rise above their senses into sentiment or prophesy. A perusal of "The Library of Mesmerism and Psychology" would enlighten them somewhat.]

LIGHT AND COLORS.

IN the May number of the *PHRENOLOGICAL JOURNAL*, Mr. Charles E. Townsend urges several objections to the commonly-accepted ideas of prismatic or primary colors, which appear to be based mainly upon misconceptions of the undulatory theory of light. All the difficulties he adduces have been removed in advance by that theory, and full answers may be found in such works as Sir John Herschell's "Familiar Lectures" and Prof. Tyndall's "Light and Electricity." In another work, Tyndall shows that heat is a mode of motion, and that light is a motion also, differing from heat only in having shorter vibrations or waves; and that the chemical rays contained in every sunbeam are still shorter waves. A ray from the sun, therefore, has three great systems of vibrations, heat, light, and chemical rays, each of which is composite—that is, has different wave-lengths. Many pages would be required

to give adequate proof of these wonderful inductions, and to trace out their beautiful and perfect exploration of all calorific, luminous, and actinic effects. Suffice it here to say, that nowhere in all the domain of science is the parallelism between theory and observation more perfect.

The most common conception of "light, heat, and actinic rays, combined in solar effulgence," is not that they are "only atoms turning on their axis," but that they are all vibrations, waves, oscillations, or shiverings (different terms to express an unknown mode of motion) in the all-embracing, luminiferous ether, which is not itself cognizable by the senses, except in these motions, which, in some cases, may be communicated to ordinary matter. The long heat-waves may be converted into the short ones that constitute light; or those may be lengthened into heat. The oxy-hydrogen blowpipe gives a feeble light along with intense heat. By placing a piece of lime in it the long waves are broken up into short ones—the heat is lessened, but the light becomes dazzling.

A very easy experiment will show the opposite conversion. Let a strong breeze strike a common wood fire, and the proportion of light to heat will be at once diminished. In like manner the chemical rays are probably increased at the expense of luminous ones by the photographer's blue skylights. The waves for each color, also, differ in length, the red being longest and the blue shortest. These have been measured with great care and are found to vary from $37\frac{1}{8}$ to $38\frac{1}{8}$ of an inch—the mean length of violet and red respectively. Green lies half way between these two, which is probably the reason it is more grateful to the eye than any other color. There seems no more reason to consider yellow and blue colors, for instance, as distortions of light, than white; for these two, when brought together, will produce white. Yellow and blue powders will not thus combine, for they largely neutralize each other, as explained by Prof. Tyndall ("Light and Electricity," p. 70).

Outside of scientific circles it is now quite common to refer all things to electricity. This agent is so striking in its phenomena, and so difficult to trace in its work, that it affords great advantages to those who are bent on the discovery of a single universal cause. But the evidence that it, like heat and light, is only a form of motion, accumulates daily. Heat will produce electricity in numberless ways; and electricity, in turn, can be made to take the

form of heat. These transformations go on without any appreciable change in the quantity of matter employed. This, in itself, should make us look with suspicion upon any attempt to exalt electricity to the primacy among natural agencies. It is no more pervading or necessary than heat, with which, indeed, it has many qualities in common. WM. PITTENGER.

ELECTRICITY AND LIFE.

MR. EDITOR—The article in your April number on "Respiration and Respiratory Apparatus," suggests some questions with reference to the voluntary, alternate action of the heart, and the composition of the atmosphere. The writer says, "The air is composed mainly of two gases, oxygen and nitrogen, but it is the former that makes this almost impalpable ether a vitalizing medium." Omitting to speak of electricity, as one of the elements of the atmosphere, is a very common error. It is electricity, doubtless, which imparts those gaseous affinities to the atmosphere, gases by which they so uniformly combine, with just sufficient force to remain so until overcome by the greater affinity of the oxygen for the carbon of the blood, with which the air is brought in contact in the process of respiration.

We have thought for years that the oxygen of the air was the purifying principle, liquifying the blood, while the electricity evolved during the chemical changes of the blood in the lungs was taken up by the numerous nerves, ramifying on the surface of the minute cells of the lungs, and stored away in the ganglions, etc., for service when called on by the will.

We have thought that the electric condition of the stomach was the opposite to that of the lungs, one being positive, the other negative,—analogous to our earth and atmosphere—the heart, being suspended between the two and connected with them by nerves, was influenced alternately by them, and so performed its functions. The presence of the nerves on the surface of the cells are suggestive of their function just as that of the blood-vessels is to convey the liquid blood.

Heat, of itself, will not beget motion. By its expansion of matter motion may be secured. But the attractive and repulsive properties of electricity will beget motion; and it is to this vital, motor element, pervading matter, and derived from the air, food, and water we partake of, that we are indebted for physical life. We

think oxygen forms the heating principle, giving liquidity and flexibility to the body, while electricity is the vital principle. We see the sap freighted with the elements of food conveyed against gravity, and deposited in the extremes of a tree or plant, and so suspended between heaven and earth where it may receive the elaborating influences of the sun; but this fluidity of the sap is an essential condition of growth, brought about, in part, by the heat of the sun, and by the chemical action of the oxygen in the ground, decomposing and compounding the soil and its liquids by electrical affinities into sap, while the electrical condition of the fibrous roots of vegetation perform the mechanical labor of gathering and forwarding it to the cellular tissues, and thence to the extremities.

Doubtless there are many who differ with us as to the cause of the alternate action of the heart and of the source of physical life and motion, and who are much more competent to discourse on these interesting questions. But, Mr. Editor, as you are very liberal in allowing mere laymen to make suggestions for the more competent to elaborate, we thought we would venture a few thoughts for your readers to consider. They are as free as the air we breathe, and, it may be, will vitalize the brains of some competent thinker, and leave him to give us something new and better than we can. It is probable the question is easier asked than answered.

E. C.

HOW TO BUILD BRICK CHIMNEY-TOPS.—All the brickwork above the superstructure, whatever the material of the building, should be made with cement mortar, which absorbs less moisture than that made of caustic lime and sand. The bricks for a chimney-top should be soaked in water for a few minutes, so that they will not extract the water from the mortar. In order to have mortar become very hard, it must dry slowly. By laying wet bricks, the mortar will set slowly, dry slowly, and eventually become almost as hard as the bricks. Every brick chimney should be covered at the top with a copestone, and arched top, or bricks placed over the flues, like the rafter of a building, for the purpose of turning off the water which would go down the inside, be absorbed by the bricks, and perhaps soak through and wet the paper or kalsomining on the inside. A chimney-top made as above will stand the influences of the weather over a hundred years without repairs.—*Industrial Monthly*.

LUCREZIA BORGIA, according to generally received authority, was the daughter of Pope Alexander VI. and a Roman woman, named Vanozza, and lived in the latter half of the 15th century. She was a woman of great beauty, and of a very warm, social disposition. She has been accused of abominable criminality with her father and her two brothers; but modern critics have called this in question. In 1498 she married Giovanni Sforza, Lord of Pesaro. This marriage was dissolved in 1497, and she afterward married Alfonso, Duke of Biseglia, who, two years later, was assassinated by order of her brother Cæsar. In 1501 she married Alfonso d'Este, a son of Ercole, Duke of Ferrara. She survived her whole family, and attracted to her court many poets and men of letters. Like her brother Cæsar, she shrank from no crime; but she was a patroness of art and learning, and on this account homage was paid to her by Pietro Bembo and other poets of her time. Victor Hugo has made her the subject of a play, which affords the basis for the well-known opera of Donizetti.

WISDOM.

If you have improved your understanding and studied virtue, you have only done your duty, and thus there seems little reason for vanity.

You must never be satisfied with the surface of things; probe them to the bottom, and let nothing go till you understand it as thoroughly as your powers will enable you.—*Wirt*.

MANNER.—Be careful to speak in a tender, kind, and loving way. Even when you have occasion to rebuke, be careful to do it with manifest kindness. The effect will be incalculably better.

A MAN has no more right to say an uncivil thing than to act one; no more right to say a rude thing to another than to knock him down. A man's own good breeding is the best security against other people's ill-manners.

We sleep, and wake, and sleep, but all things move;

The sun flies forward to his brother sun;
The dark earth follows, wheeled in his eclipse,
And human things, returning on themselves,
Move onward, leading up the golden year.

WHEN the men who work begin intelligently to investigate the foundations of the principles which underlie our institutions, systems, and laws, it is a hopeful and gratifying evidence that our political and social well-being will be faithfully conserved.

THE tablet of the heart should be kept so pure in purpose and so spotless from deception, evil thinking, and wrong-doing, that a gainsaying world

will be able to discover no more disfiguring blot than appears on a beautiful record of snowy whiteness.

MIRTH.

[Under this heading we propose to publish
"A little nonsense now and then;"
which
"Is relished by the wisest men."]

NASBY says an honest man gathers no moss. A rolling stone's the noblest work of God.

OVER the door of a cobbler's shop in Providence appears this legend: "Boots and shoes is made hear—ladies and shentlemans repaired."

A LITTLE four year old, the other day, nonplussed his mother by making the following inquiry: "Mother, if a man is mister, aint a woman a mystery?"

A COMMITTEE was recently appointed to investigate the excessive chastisement of a pupil in a Michigan public school, and reported that the punishment was not actuated by malice, but occasioned by an "undue appreciation of the thickness of the boy's pantaloons."

AN old Baptist minister enforced the necessity of difference of opinion by this argument: "Now, if everybody had been of my opinion everybody would have wanted my wife." One of the deacons who sat just behind him responded, "Yes, and if everybody were of my opinion, nobody would have had her."

STEAM ENGINE JOKES.—Engineer Stone, or "Old Rock," as he is more generally called among his acquaintances, who runs on the east end of the Peoria and Oquawka Railroad, is a natural wag, dry as a chip. One day "Rock" met with a party of the St. Louis, Alton and Chicago Railroad boys at Peoria Junction, and they stepped into Sam Emery's for a "social" glass of beer. Conductor Hedges of the St. Louis road, as a sort of sentiment, gave—"Old Rock, otherwise Stone, a perfect brick." "That is very good," exclaimed Stone. "Here is to old Brush, otherwise Hedges, a perfect stick." The next that was seen of "Rock" he was pursuing a "2.40" gait toward his engine, and Hedges with a big stick close on his rear. This is not quite so good as the repartee of Nick Denton, while a division engineer on the Illinois Central at a festival several years ago in De Witt County. A fellow named Jack Wallace gave as a sentiment, "*The two Nicks*—Old Nick and Nick Denton." The table came down with a clatter. Nick arose as grave as a judge, and when the noise had subsided he said he fully appreciated the honor conferred on him in being named in connection with Jack's most intimate friend! He hardly knew how to requite the kindness, but as one good turn deserves another, he would give—"The two Jacks"—Jack W—, and Jackass!" Jack Wallace collapsed, and the company went into hysterics.

Our Mentorial Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. *We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of its early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage.*

THICK LIPS.—Thick lips are indicative of a strong emotional nature in general. Where the person's associations have been of a rather low character, they may exhibit a sensual disposition, in which case there is a coarseness very evident in their conformation. It is altogether probable that you have a very loving and affectionate nature, and perhaps Amativeness plays too large a part in your thoughts and emotions. If so, you must endeavor to curb the tendency, to live purely in thought and sentiment. In connection with this mental discipline, frequent bathing of the lips in cold water will be found beneficial. Of course you can not expect to modify much the lineaments of the face, but you may bring about a more refined condition, as accompanying an improved mental tone.

WHO SHALL BE PRESIDENT?—Among the aspirants for the White House we suppose that John Quincy Adams, of Mass., has his eye on the seat which was filled by his grandfather and great-grandfather. As Phrenology is getting better known, people begin to inquire what sort of heads candidates for office have. Have you a bust of the "old man eloquent?" If so, what are its chief traits? and do you know whether the present John has a similar head?

Ans. John Quincy Adams, the ex-President, had very large Firmness, large Conscientiousness, Self-Esteem, Approbation, Combativeness, Individuality, Eventuality, Locality, and Language, and was an honest, straightforward man, who, were he in his prime to-day, would thunder loudly against the political wrongs and every swindling device for corrupt and dishonest gain.

Our correspondent or any of his friends can obtain from this office a cast of the head of John Quincy Adams, properly boxed and sent by express, by remitting to us \$3. We may add that we have the casts of the celebrated Thomas Addis Emmet, George Combe, Black Hawk, the great Indian chief, and many others that we can send at the same price

WEAK EYES.—Should a bookkeeper take a walk before or after breakfast? What should be his diet? My eyes are good, but from constant writing they are growing weak, and I am obliged to look closely by lamp-light in order to see. Would you advise glasses? for I am but twenty-nine years old.

Ans. Your general health is doubtless suffering from close confinement in-doors; and by the constant use of your eyes while becoming depressed in health, there is a great strain upon them. If you could get out of doors for a year, could connect yourself with something that does not require very close looking, it would be beneficial to you. Bookkeepers should take active physical exercise a dozen times a day. If they have nothing to do which requires strength, they can swing their arms, strike out from the shoulder into the empty air, and imagine themselves gladiators. Most bookkeepers lack fresh air, and being quiet in their habits, their circulation becomes poor, and they feel chilly and thus keep their business place too warm. A bookkeeper's diet depends something on the man and the amount of confinement he has. It should not be pork, sausages, griddle cakes with butter and sugar; but lean beef, fruit in liberal measure, and the bread should be coarse, so as to keep his bowels free. If you must keep books, and your eyes are failing, you should manage to get a little time each day to rest them. You should wear glasses so that you can see to do your work easily. We know people who have strained their weak eyes or their old eyes for years trying to see without glasses from a superstitious objection to the use of glasses, or through a foolish vanity, lest somebody should think they were getting old.

INTRODUCTIONS.—Will you please inform me when and where to introduce people, and should the parties introduced shake hands and express happiness for the opportunity of the acquaintance?

Ans. This subject can not here be answered satisfactorily and in an extended manner, because the circumstances of different persons and the usages of different places require a practice of different methods. Men who meet in a business way generally shake hands cordially when introduced by a friend, and express pleasure in making the acquaintance; but when ladies and gentlemen are introduced, or when ladies are introduced to each other, shaking hands depends upon the usages of the community or the age of the parties respectively, or the circumstances under which they are introduced. These all must be taken into consideration. If you will read "How to Behave," pub-

lished at this office, price 75 cents, you will learn the rules and exceptions in this respect, and 999 other valuable matters pertaining to daily life and comely behavior.

WHAT ARE QUACK MEDICINES?

Ans. All those substances, whether pills, powders, bitters, or other slops, put up in "large" quart, pint, or other sized bottles, said to contain healing virtues, which are *not* indorsed by the medical profession. *All* the so-called patent medicines are quack and frauds. Those who swallow them only *worse* their condition. It is only the ignorant—at least ignorant in these medicines and their bad effects—that buy and swallow them. Those who manufacture these advertised mixtures, whether liquid or solid, never take them into their own stomachs. Very few physicians of any school swallow the poisons which they prescribe for others. It is no less true than it is a common remark that a doctor seldom takes his own drugs. Quack medicines advertised in the newspapers are put up to sell to all comers, while all regular physicians of the drug schools give special prescriptions, which are put up by licensed druggists. Hygienic physicians give no poisonous drugs nor alcoholic stimulants whatever.

PETRIFYING BODIES.—Please inform me as to the truthfulness of the following paragraph through the Mentorial Bureau:

"Mazzini's body is to be petrified by the celebrated Gozini of Genoa, so that it will never change through any vicissitude. The professors of this art have brought it to perfection at last. They can render the body like stone, or by immersion in certain liquids it seems only to be asleep. Gozini has a curious museum of humanity petrified, well worth seeing. The ancients mummified, but that changed the appearance, while this process leaves the subject life-like in appearance."

Ans. We are not informed as to the process spoken of above. There should be a method of preserving entire the human system, and rare, valuable, and curious specimens of animals. If it is not yet reached, we doubt not it will be at no very distant day.

CHILDREN'S HEADS.—Would it be well to have the heads of children examined by a competent phrenologist with a view to bestow special culture upon the deficient organs? and at what age should such an examination be made?

Ans. This is precisely the field in which Phrenology is designed to be of most paramount service to the world. If parents know at five or six years of age, or even earlier, what the predominant or over-mastering forces in children are, or are to be, and wherein their weakest need cultivation, they can essentially strengthen and modify the organs before they get large enough to make such culture doubtful if not impossible. If from five to fifteen years of age a child can be rightly trained, it will afterward be likely to go forward according to its previous training and culture; whereas if it grows up without culture of the right kind until it is fifteen, it is pretty hard to get it in the traces

afterward. Solomon was right whatever exceptions may be quoted against him, "Train up a child in the way he should go, and when he is old he will not depart from it." It will be observed that he said "train up," not merely educate. Children require education and training. To educate is to show and teach what ought to be done; training is in taking care that it be done.

FIRMNESS AND SELF-ESTEEM.—I am sadly deficient in force of will, determination of purpose, decision of character, and Self-Esteem. Can Phrenology, after opening my eyes to my condition and showing me my defects, offer me a remedy?

Ans. A proper exercise of the defective faculties will tend to give them strength. A man can improve his mental constitution, for every faculty is organized on such a principle that exercise gives it strength, just as exercise gives strength and growth to muscle. A work entitled "Self-Culture" will show you how to increase the activity of the organs in question.

INSANITY.—A young lady of our acquaintance has recently become deranged. She lately lost her mother, and it is hinted she has had some disturbance in her love relations. Can you give us any suggestions that will be beneficial to her or her friends in the case?

Ans. The causes of insanity are as numerous as are the faculties. It is not easy to give sound advice relative to a case unless the facts and the special manifestations are known to the one who gives the advice. One is insane on Veneration, another on Conscientiousness, on Friendship, on Parental Love or Conjugal Love, some on Acquisitiveness, Destructiveness, or Constructiveness; some in the poetic element, others in various intellectual faculties; one is music-mad, another deranged on mathematics. We may say that the patient should be treated bodily to bring about the right conditions of the system, if possible. Her case belongs to the physician, and the physician ought to be a phrenologist to understand the case well. Consult Dr. Buttolph, of Trenton, N. J.

What Chen Say.

FEET-WASHING A RELIGIOUS OBSERVANCE.—EDITOR A. P. J.—In the February number of the JOURNAL, in answer to the question: "Are Christians required to wash each other's feet in order to carry out the doctrines taught in the Bible?" you answer, "Yes, if one feels that his safety depends upon it. But when one is able to wash his own feet, why trouble another to do it?" which answer we do not regard as consistent with your general manner of disposing of such subjects. You would have a man wash his feet "every day," and not only if he *feels* that his health and comfort depend on it. As a teacher, you know that comfort *does* depend upon cleanliness, although your

arguments would scarcely be appreciated by those classes of human beings who, like the pig, *feel* very good in the mud, or, Scripturally, "love darkness rather than light." But we have understood you to teach that a man can not violate any of the laws of nature without suffering the penalty, even if he does feel disposed to do so, which we believe. The same is true of the Divine law also. The Christian law directs its subjects to believe and to be baptized. Would you also teach that Christians are required to believe and be baptized, in order to carry out doctrines taught in the Bible, only if they feel that their safety depends upon it? They can also baptize themselves (whether by immersion or sprinkling); then why trouble another to do it? The command of Jesus is not "keep clean feet," but "*wash one another's feet.*"

When you write your work on Theology, in the light of Phrenology, we will expect to learn—for we shall certainly read it, D. V.—valuable lessons upon keeping the head, feet, and entire body clean, without the ordinances of Christianity, but the conscience of the enlightened reader of revelation must be purified "by obeying the truth." (1 Pet. i. 22). "If ye know these things, happy are ye if ye do them." (John xiii. 17.)

H. R. HOLSINGER.

[If our good friend supposes that our playful remark was intended to bring a valued and obligatory religious form of his into disrepute, we greatly regret it. We have always regarded the act of Christ in washing his disciples' feet, not as an act to be followed literally, but as an act typical of a spirit of kindness and service—and, as washing the feet in Christ's time was considered one of the most menial of services, Peter was amazed when the Master proposed to wash his feet, and he earnestly protested, "Thou shalt never wash my feet;" but when he found that there was to be somehow a virtue in it, he said, "Lord, not my feet only, but my hands and my head."

To the ambitious he said, "He that would be great among you, let him be your (servant) minister." There are many things which teach a lesson of service and self-sacrifice for others, and it is the duty of each man and of each age of men to minister kindly to the wants of others, in any form which may be required, whether looking after orphans or taking care of the sick. There is a great deal of feet-washing or beneficent and self-sacrificing service required, and it matters little what its symbol is, whether it be washing feet or feeding the hungry or teaching the ignorant.]

WANTED! NINETY-NINE THOUSAND DOLLARS.—Mr. C. E. Clardy, of Hernando County, Florida, proposes to be one of a hundred to give \$1,000 each toward printing, for gratuitous distribution, copies of "COMBES'S CONSTITUTION OF MAN." Here is the promise of the first thousand. Who will be No. 2? No. 3? and so on. We will

take a few shares, say ten, to fill up, if necessary, for we should like to have the thing done. Mr. C. says he believes the reading of this work will do mankind more real good than any other he is acquainted with.

A CHARACTER.—Here is a bit of personal description by the late Mr. Prentice, of the *Louisville Journal*. Readers east and west, north and south, in Europe, Asia, Africa, and America, will readily guess who is meant:

"A locomotive that has run off the track, turned upside down, and its cowcatcher buried in a stump, and the wheels making a thousand revolutions a minute—a kite in the air which has lost its tail—a human novel without a hero—a man who climbs a tree for a bird's nest on a limb, and, in order to get it, saws the limb off between himself and the tree—a ship without a rudder—a clock without hands—a sermon that is all text—a pantomime of words—an arrow shot into the air—the apotheosis of talk—the incarnation of gab. Handsome, vivacious, versatile, muscular, as neat as a cat, clean to the marrow, a judge of the effect of clothes, frugal in food, and regular only in habits—a noon-day mystery—a solved conundrum—a practical joke in earnest—a cipher hunting a figure to pass for something; with the brains of twenty men in his head, all pulling different ways; not bad as to heart, but a man who has shaken hands with reverence."

HOW WE LOST A SUBSCRIBER.—This is the way we suffer for telling the truth. Here is the confession of one of our *former* patrons. How many others have been lost to us, and not reported, we do not know:

"My subscription to the *PHRENOLOGICAL JOURNAL* ran out last July, and since then I have not renewed the same, suffering from the following sting: '*A smoking phrenologist is a disgrace to the profession.*' I know you are right, Mr. Editor, and I hope to be able to relinquish the bad habit after I have obtained a good substitute—a precious wife, of which, I am happy to say, there is now some prospect. I have made 'sundry and manifold' experiences in the courting line, and have finally come to the conclusion that a *German-American lady* is what *I like*—what *I want*, being myself a 'fish of the same stripe,' and it would be well to consider first and foremost the affinity between 'flesh and blood' national relationships before advising a match, on the ground that we would sooner 'bear and forbear' with those who are of the *same composition* of matter than one of *opposite* cast,—as I have found out through my favorite nymph, Experience."

[The idea of taking a wife as a substitute for a tobacco pipe! We hope the lady will never, never allow him to kiss her rosy lips when there is the least smell of tobacco on his own. One thing more, we hope she will refuse to marry him unless he *renews* his subscription for this *JOURNAL*. Call it compulsion if you will, but let her *insist*.—ED.]

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

A REPOSITORY OF

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DEVOTED TO

ETHNOLOGY, PHYSIOLOGY, PHRENOLOGY, PHYSIOGNOMY, SOCIOLOGY, PSYCHOLOGY, EDUCATION,
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VOL. LV. OLD SERIES.—VOL. VI. NEW SERIES.

July to December, 1872.

S. R. WELLS, EDITOR.

NEW YORK:
SAMUEL R. WELLS, PUBLISHER, 389 BROADWAY
1872.



"Quiconque a une trop haute idée de la force et de la justesse de ses raisonnemens pour se croire obligé de les soumettre a une expérience mille et mille fois répétée, ne perfectionnera jamais la physiologie du cerveau."—GALL.

"I regard Phrenology as the only system of mental philosophy which can be said to indicate, with anything like clearness and precision, man's mixed moral and intellectual nature, and as the only guide short of revelation for educating him in harmony with his faculties, as a being of power; with his wants, as a creature of necessity; and with his duties, as an agent responsible to his Maker and amenable to the laws declared by the all-wise Providence."—

JOHN BELL, M.D.

"To Phrenology may be justly conceded the grand merit of having forced the inductive method of inquiry into mental philosophy, and thus laid the permanent foundations of a true mental science."—*Encyclopædia Britannica*, 8th Edition.



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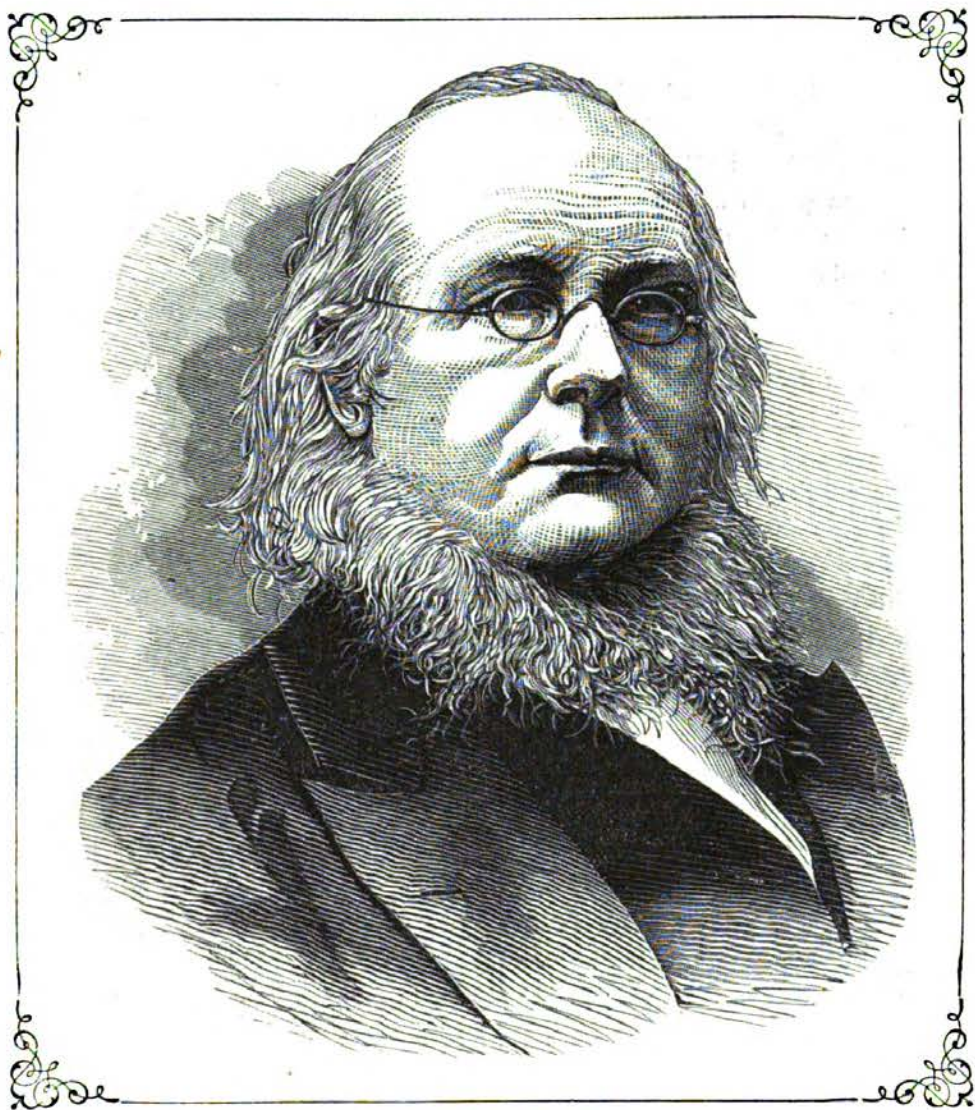
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THE PHRENOLOGICAL JOURNAL AND LIFE ILLUSTRATED.

VOL. LV.—No. 1.]

July, 1872.

[WHOLE No. 402.]



HORACE GREELEY.

THE PRESIDENTIAL CAMPAIGN.

CANDIDATES AND PLATFORM OF THE LIBERAL REPUBLICANS.

HORACE GREELEY, OF NEW YORK—B. GRATZ BROWN, OF MISSOURI.

JUDGING from the exterior aspects of the political movements of the day, all parties have taken up the cause of reform, either in earnest or as a cloak with which to cover their scheming, and are bent on reorganizing the affairs of state and nation. Ohio has

been the theater of two important conventions—the one held in Columbus, in February last, the result of whose proceedings we set forth in our May number, and that held in Cincinnati, in May, which we now purpose to consider. This latter convention, according to the declarations of the platform it adopted, was held for the promotion of the interests of Republican reform, and the gentlemen preferred by the seven hundred delegates who composed the assembly as their nominees for the highest offices in the gift of the American people have been already announced to our readers through the agency of telegraph and newspaper. The candidate for the Presidency of the United States is probably better known—by name, at any rate—throughout the country than any other American.

HORACE GREELEY.

It is now something more than twenty-five years since a letter was received from one of our subscribers in Ohio, inclosing twenty dollars, with a club of subscribers for the New York *Tribune*. Not being acquainted with the publisher of that paper, the sender desired us to ascertain what were the probabilities of the *Tribune* being continued. If it were published according to its Prospectus, we were to hand over the money; but if, like many another newspaper project, it were not likely to succeed, the money was to be retained or returned. In a postscript to that letter, we were desired to publish some account of Horace Greeley, together with his portrait, that the people might judge what manner of man he was. We handed over the twenty dollars, with the names, and inquired of Messrs. Greeley and McElrath what were the probabilities as to the continuance of their paper. Of course, we were promised that it should go on.

Referring to the postscript, we inquired of Mr. Greeley where we could find a biographical sketch of himself. He replied, "none

had ever been published, nor ever would be, with his consent." A few weeks later another letter, with the same amount, and with the same request, came to us from Michigan. As in the former case, we handed over the money, with the names, and the *Tribune* was sent, as requested. On again applying to Mr. Greeley for some facts in regard to the time and place of his birth, he most emphatically declined to inform us, saying that he had no ambition to be published to the world. Other requests reached us from various quarters, begging us to publish a sketch of Horace Greeley, formerly editor of the *Log-Cabin*, now of the *Tribune*.

We called again on Mr. Greeley, exhibited the letters, and informed him frankly that we had now, in compliance with many requests, determined to publish such an account of him as we could obtain; all we asked him to do was to tell us when and where he was born, where he went to school, where he learned his trade—that of a printer—and something of his ancestors—a mere outline, from which we could set forth such a biographical sketch as we were accustomed to publish.

We had obtained his likeness—a daguerreotype—some time previously, and made a phrenological examination, and knew the measurement of his cranium. And we then informed Mr. Greeley that we had come on business; that he was already a public man; that the public had a right to know all they could learn of him; that we should not publish anything libelous, but that we simply wished to gratify a proper desire on the part of our subscribers to know something more of this already public character. Again he begged to be excused; we pressed our suit, and a time was appointed for us to call again, when the information sought should be given. In the PHRENOLOGICAL JOURNAL for 1847 we published the first sketch ever given to the world of Horace Greeley.

From that sketch we take the following Phrenological Remarks, which his career has abundantly verified:

His head measures twenty-three and a half inches in circumference, and is uncommonly high, so that its mass of brain is really very

faculties and intellect. His controlling organs are Benevolence, Adhesiveness, Firmness, and Conscientiousness. The possessor of such organs could not be other than reformatory, and a sincere and devoted lover of his race. And this predisposition is still



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great. Few heads measure as much, and few are as high, two conditions which, collectively, indicate a brain of almost the largest size. His developments indicate anything but selfishness or animality. On the contrary, they show him up to be philanthropic, lofty in his aims, and governed by the higher

further strengthened by his possessing only moderate Veneration, so that he would not cling to the antiquated, but, forgetting the past, would embrace whatever new things promised to ameliorate suffering humanity or advance mankind. Such powerful Conscientiousness as his would likewise search out

the *right* of things, and be governed by it; and such predominant Firmness would plant itself on the ground of right and humanity.

His well-developed Firmness, also, confirms the remark often made in our JOURNAL, that all distinguished men possess this faculty very powerfully developed. It is indispensable to success in any pursuit, much more to public men.

His having uncommonly large Adhesiveness also coincides with his having a very large number of devoted personal friends. The aid given by this faculty to public men has often been remarked in our JOURNAL, and greatly adds to the many illustrations of this principle. Probably no instrumentality of distinction is equally potent. It makes friends, and these bring influence.

Amativeness and Philoprogenitiveness are fully developed. The latter, combining with his intellect, interests him in the cause of education.

Approbateness is prominently developed. This gives aspiration, and, in concert with his large intellectual and moral organs, a desire to become distinguished in the intellectual and moral world. Love of reputation for morals, truthfulness, and integrity is a leading characteristic, and accordingly his private character is unsullied.

Self-Esteem is fair, yet rather deficient than excessive—just about enough to prevent trifling, but not enough to create self-sufficiency. Its lower division, which gives power of will, love of liberty, and the true republican feeling, is large.

Resistance is great; so is moral courage—Combateness governed by Conscientiousness and supported by Firmness—yet Destructiveness, or the pain-causing element, is weak, in combination with predominant Benevolence. Hence his anti-capital punishment sentiments. This organization renders its possessor harsh and severe no further than

is indispensable in carrying his ends, but never personal or vindictive as such.

Secretiveness is full, while Cautiousness is large. This organization gives a due degree of policy and discretion, yet, in combination with high moral organs, prevents deception and cunning.

Continuity is weak, Ideality is only fair. Hence his carelessness in dress and personal appearance.

Imitation is only medium, but Mirthfulness is large. This, with his Combateness, manifests itself more especially in his reviews of his opponents. His intellectual lobe is uncommonly large and well-balanced. Its forte consists in very large Eventuality and Comparison; the former remembers, the latter compares facts, and utilizes that vast range of miscellaneous knowledge of which he is so complete a master. These organs, in combination with his predominant Benevolence, Friendship, Conscientiousness, and Firmness, more than all his other faculties combined, qualify him for a commanding post of influence, and lead off in his character. We rarely find equally large Eventuality and Comparison, and both friend and foe are witnesses of their great power in his character. These are also ably supported by uncommonly large Causality; hence the clearness, cogency, and power of his arguments, and his copious flow of thought and sound sense. This organization coincides with the fact that he rarely puts pen to paper without saying something, and something having a moral bearing.

Form and Size are large. Language is good, but much less than the reasoning or thought-manufacturing organs—sufficient to furnish words enough for the pen, yet too little for extempore fluency. Agreeableness is rather deficient; but Human Nature is large, and would be likely to manifest itself, by enabling him to find ready access to the human mind, and to sway mankind; that is,

to touch the secret chords of human action, and urge those motives which shall produce effect.

In personal appearance, as in character, Mr. Greeley is peculiar. He is tall, standing six feet high, and weighs upward of 190 pounds. His complexion is fair, his eyes light blue, his hair of a silky fineness, now silvered somewhat; skin soft and white, or of peachy hue. He has a youthful and genial expression, betokening temperance and health; which, with his kindly, joyous spirit, gives him a pleasant, sunny countenance.

Horace Greeley was born at Amherst, N. H., February 3d, 1811, and is the oldest survivor of seven children. His father and mother were both born a few miles eastward of Amherst; the latter in Londonderry, N. H., of Scotch-Irish lineage (her maiden name Woodburn), the former in that town or Pelham, of English extraction; but both families had long been settled in that region—the Woodburns since 1723. All his ancestors, so far as there exists any remembrance, were farmers—the Greeleys generally poor, the Woodburns in comfortable circumstances, having been allotted a good tract of one hundred and twenty acres in the first settlement of Londonderry, which still remains in the family—the property of an uncle of the subject of this sketch, who, when not quite three years of age, was taken to spend the winter thereon, in the family of his maternal grandfather, with whom he was early a favorite. After the novelty of his visit had worn off, he was sent to the district school, a few rods off, rather to diminish the trouble of looking after him in a large family of grown persons, than in the hope of his learning anything. But he had already been taught the alphabet, and the rapidity with which he passed from this to the first class in reading and spelling is still a matter of vivid local remembrance and even fabulous exaggeration. At four years of age he could read and spell creditably; at five he was esteemed at least equal, in those branches, to any one attending the school. He continued at his grandfather's during most of the school months—usually six in each year—until six years old, the school in his father's district

being two miles from the family dwelling. But he evinced no such faculty for learning the higher branches. Grammar, commenced at five, was not fairly comprehended until eight, nor mastered until some time later. In Geography proper (the relation of places to each other) he was not proficient, though the historical and other statistics intermingled therewith were easily and rapidly acquired. Penmanship utterly defied all his exertions; and it was only when he came, some years later, to take up the elementary Arithmetic of the common schools, that he found himself able to press forward with his infantile celerity. He could not remember the time when he had not the Multiplication Table at command, and all the processes of school arithmetic seemed to him but obvious applications of, or deductions from this. But his school-days in summer ended with his seventh year, and in winter with his fourteenth, being much interrupted at earlier periods by the necessities of a life of poverty and labor. He never enjoyed the benefits of a day's teaching in any other than a rural common school generally of two or four months each winter and summer, and these very far inferior to the schools of the present day, even in the least-favored sections of New York or New England.

When not quite ten years of age, his father lost his little property in New Hampshire, and removed to West Haven, Vt., near the head of Lake Champlain, where he remained nearly six years. The first two were employed in land-clearing upon contract, with the aid of his two sons; the next, in a saw-mill, while the boys worked on a small, poor farm; the residue, in clearing and farming upon shares. During these years, as before, our subject was favored with the loan of books and periodicals, by neighbors of ampler resources, and devoted very much of his spare time to reading, especially in the winter evenings, when the labors of the long days of summer, which so severely tax the sinews of a youth of ten or twelve years, had been succeeded by shorter days and lighter tasks.

At eleven years of age he made (at Whitehall, N. Y.) his first attempt to find employment as an apprentice to printing, which he had previously decided to follow as a vocation, but was rejected on account of his youth.

Afterward, he could with difficulty be spared. When he was fifteen, his father found himself enabled to make a long-meditated tour of observation westward, with a view to the removal of his family; and now the eldest son was permitted to gratify the cherished desire of his heart, by entering (April 18th, 1826), as an apprentice, the printing-office of the *Northern Spectator*, at East Poultney, Rutland County, Vt. Here he remained more than four years, until late in June, 1830, when the paper was discontinued.

Meantime, his father and family had removed, in the fall of 1826, to Wayne, Erie County, Pa., where he visited them in 1827 and 1829, and whither he repaired, on quitting Poultney, in 1830. Working by spells on their rude wilderness farm, and, when opportunity offered, at his trade, in Jamestown and Lodi, N. Y., and in Erie, Pa., he remained in that region for a little more than a year, finally quitting it, when work ran out, about the 1st of August, 1831, for New York, where he arrived on the 16th of that month, and has ever since resided. He worked as a journeyman during the first year and a half of his stay, with some unavoidable interruptions, through want of employment, until early in 1833, when, in connection with another young printer, he purchased materials, and undertook the printing of a cheap daily newspaper, for a man who failed soon afterward. Other printing was soon procured, less promising, but better paid. His first partner was suddenly taken away by drowning, in July; another took his place; the concern was moderately prosperous; and in the following spring (March 22d, 1834), our subject issues, without subscribers, and almost without friends, in a city where he was hardly known beyond the circle of his boarding-house and his small business, the first number of the *New Yorker*, a weekly journal, devoted to popular literature and an impartial summary of transpiring events. That paper was continued through seven years and a half, having a circulation which rose, at one time, to over nine thousand, and averaged more than five thousand throughout, but was never pecuniarily profitable, owing, in good part, to bad management in the publishing department. In September, 1841, it was merged into the weekly issue of the *New York*

Tribune, started as a daily on the 10th of April in that year, and still continued under his editorial management.

He was married in July 1836, to Mary G. Cheney, of Litchfield, Conn. They have had five children, of whom only two daughters survive.

The course of Mr. Greeley since he began the publication of the *Tribune* is so well known that we scarcely need say more. Let it suffice that he has been one of the most industrious workers upon the American newspaper press; has lived a strictly temperate life—using neither alcoholic liquors nor tobacco in any form—is a circumspect husband, a kind and indulgent father, and in all respects a sober, honest, intelligent, law-abiding, and well-behaved American citizen. Besides editing one of the most—probably the most—influential journal in America, he has found time to write several important works, the most elaborate of which is a history of the great rebellion, “*The American Conflict*,” his copyright on which, we are informed, has amounted to nearly a hundred thousand dollars. “*Hints Toward Reform*,” first published by the Harpers, then by ourselves, had a considerable sale. More recently, “*What I Know about Farming*” has reached fifty thousand copies or more, and has become a by-word throughout the country. Mr. Greeley also contributes to the magazine literature of the country, and writes essays for religious and other weeklies.

It has been charged that Mr. Greeley has stood on all sides of every question, as though this were against him. Does this not rather imply that he has a mind sufficiently broad and comprehensive to consider a question in all its bearings? whereas one of narrow or shorter reach would see a matter in only a single aspect, and thereby come to a conclusion far from correct.

It is said that he is impatient and impulsive. We never heard of his striking a person, nor challenging any one to fight a duel. There are editors of papers who have been frequently horsewhipped, and it is supposed they made money by it. Mr. Greeley never has invested in this sort of capital. If he is sometimes intemperate in expression, we may ask if there has not been occasion.

If it be insisted that he should be perfectly

circumspect in all things, we reply that he would then be the superior of any living mortal. Those who live in glass houses should not throw stones. Those who require perfection in others, should themselves look in a mirror.

The PHRENOLOGICAL JOURNAL is not partisan, but it is intensely American. It believes in a democratic republic, which implies self-government in contradistinction to a monarchy, where freedom, liberty, and justice are subservient to kingly rule.

We find Mr. Greeley to favor all measures calculated to advance the best interests of individuals, States, and the nation. His faults may be numerous and palpable, but he is a free, frank, open-hearted man. His talents, his integrity, and his great kindness are conceded by all who know him.

We present him as he is. Our readers will form their own judgments as to his fitness to serve them in another capacity besides that of an editor.

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The portrait of this gentleman indicates a strong character; there is clearness, point, emphasis, and executive power exhibited in that head and face. The brain, considerably above the average in size, is of good quality, and exhibits health, strength, and powers of endurance. The reader need not be told that such a head and face as this could not be trifled with. There are both Benevolence and force; there is justice, and it is evidently tempered with mercy; but there is unflinching decision, with dignity, self-reliance, and a spirit to maintain the right.

Observe those large perceptive faculties, giving great matter-of-fact talent; those large reflectives, giving knowledge of principles and comprehensiveness of judgment. Human Nature is also large, indicating sagacity, intuition, ability to read others through and through at a glance. There is a large cerebellum, indicating strong affection, which, however, is subordinated to intellect and moral sense. There is pride of character, which defends the good name of men, the

state, and the nation. There are soldierly qualities here. Would one venture to infringe upon his rights it would be at his peril. He can say No, and maintain it, or Yes, and do it. To use a Western phrase, supposed to have originated on the Mississippi, "he will do to tie to;" in other words, he may be depended on, is reliant, his word would be as good as his bond. There is nothing slipshod or loose in this character. Those who trust him will not be deceived or disappointed.

Did we not know his pursuit, we could safely indicate what he can do, or what he should do; first, being educated, he could excel in the law; had it been in medicine or surgery, he would have been successful, either as a teacher or a practitioner; supposing it had been in theology, what a missionary he would have made! His *forts* would have been to open up new countries in which to plant reformatory or advanced ideas.

He is progressive; congregations to whom he would preach would not go to sleep while he was preaching. As a legislator and a statesman, he may be expected to take broad, comprehensive, and national views of subjects. While one man comprehends a town, a county, or a State, another comprehends a continent in all its length and breadth.

Supposing he had been a school-master, a professor in college or university, what a disciplinarian he would have made! how clear and lucid his instruction as a teacher or as a speaker! There is magic in his look; magnetism in the man; he is not an "exhausted receiver." He floods others with his spirit,—in short, he is very much such a character as our imperfect likeness indicates. With auburn hair, a mental sanguine temperament, with great motive power, strong frame, immense powers of endurance, he is a representative western American. May the likes of him be multiplied!

Benjamin Gratz Brown, the candidate for

the Vice-Presidency, is a native of Kentucky, and about forty-six years of age. He graduated from Yale College, in the class of 1847, studied law, and settled in St. Louis, where he early became prominent in politics. Like Mr. Greeley, he first attracted public attention and won fame as an editor—the editor of the St. Louis *Democrat*, from 1850 to 1857. He had supported Van Buren and Adams in 1848, and, as an emancipationist in a slave State, gravitated toward the Republican organization, of which he was the original head and front in Missouri; supporting Mr. Fremont in 1856, Mr. Lincoln in 1860 and '64, and Grant in 1868. When the rebellion opened, he took an active part in it at the beginning, participating in the capture of Camp Jackson and the subsequent operations which held Missouri to the Union. In 1868 he was elected to the Senate of the United States to fill the unexpired term of Waldo P. Johnson, who had been expelled.

He was elected to a seat in the State Legislature in 1852, and remained there a number of years. He had entered upon his public career as a Democrat, following Benton. He became identified with the German population of St. Louis, and has always been supported by them. He is said to have made the first speech in behalf of emancipation in a Southern legislature.

In 1866 he declined a re-election to the United States Senate, and did not participate in politics until 1870. He opposed the proscriptive Constitution of Missouri, and a large party of Liberals, led by Schurz, made Mr. Brown their standard-bearer for Governor. The result of the campaign was his election by the unprecedented majority of 42,000. His administration has been a success, and he is looked upon as a founder of the Liberal party. In appearance he is of average height, light complexioned, with reddish-brown hair and blue eyes.

THE PLATFORM.

We, the Liberal Republicans of the United States, in National Convention assembled at Cincinnati, proclaim the following principles as essential to just government:

1. We recognize the equality of all men before the law, and hold that it is the duty of Government in its dealing with the people

to mete out equal and exact justice to all, of whatever nativity, race, color, or persuasion, religious or political.

2. We pledge ourselves to maintain the union of these States, emancipation and enfranchisement, and to oppose any re-opening of the questions settled by the Thirteenth, Fourteenth, and Fifteenth Amendments to the Constitution.

3. We demand the immediate and absolute removal of all disabilities imposed on account of the rebellion, which was finally subdued seven years ago, believing that universal amnesty will result in complete pacification in all sections of the country.

4. Local self-government, with impartial suffrage, will guard the rights of all citizens more securely than any centralized power. The public welfare requires the supremacy of the civil over the military authority, and freedom of person under the protection of the *habeas corpus*. We demand for the individual, the largest liberty consistent with public order; for the State, self-government, and for the nation, a return to the methods of peace and the constitutional limitations of power.

5. The Civil Service of the Government has become a mere instrument of partisan tyranny and personal ambition, and an object of selfish greed. It is a scandal and reproach upon free institutions, and breeds a demoralization dangerous to the perpetuity of republican government. We therefore regard the thorough reform of the Civil Service as one of the most pressing necessities of the hour; that honesty, capacity, and fidelity constitute the only valid claim to public employment; that the offices of the Government cease to be a matter of arbitrary favoritism and patronage, and that public station become again a post of honor. To this end it is imperatively required that no President shall be a candidate for re-election.

6. We demand a system of Federal taxation which shall not unnecessarily interfere with the industry of the people, and which shall provide the means necessary to pay the expenses of the Government, economically administered, the pensions, the interest on the public debt, and a moderate reduction annually of the principal thereof; and, recognizing that there are in our midst honest but irreconcilable differences of opinion with re-

gard to the respective systems of Protection and Free Trade, we remit the discussion of the subject to the people in their Congress districts, and to the decision of Congress thereon, wholly free of Executive interference or dictation.

7. The public credit must be sacredly maintained, and we denounce repudiation in every form and guise.

8. A speedy return to specie payment is demanded alike by the highest considerations of commercial morality and honest government.

9. We remember with gratitude the heroism and sacrifices of the soldiers and sailors of the Republic, and no act of ours shall ever detract from their justly earned fame or the full reward of their patriotism.

10. We are opposed to all further grants of lands to railroads or other corporations. The public domain should be held sacred to actual settlers.

11. We hold that it is the duty of the Government in its intercourse with foreign nations to cultivate the friendship of peace, by treating with all on fair and equal terms, regarding it alike dishonorable either to demand what is not right or submit to what is wrong.

12. For the promotion and success of these vital principles and the support of the candidates nominated by this Convention, we invite and cordially welcome the co-operation of all patriotic citizens, without regard to previous affiliations.

PHRENOLOGY AND THE PHYSIOLOGISTS—A REVIEW.

BY R. T. TRALL, M.D.

OF the four fundamental principles on which the Science of Phrenology is professedly founded, all the standard authors on physiology admit three. They admit that the brain is the organ of mind; they admit that size is a measure of power, and they agree that education develops mental power; but, with respect to the fourth proposition, that the brain consists of a plurality of organs, they disagree.

The doctrine that special mental functions are performed by particular portions of brain-substance was not original with Gall, although he was the first to demonstrate it by a series of careful and long-continued experiments and observations; but, like most pioneers in a new field of scientific investigation, some of his definitions were crude, and some of his explanations erroneous; yet he has laid the only foundation the world has ever had for a rational mental philosophy.

Ever since the days of Aristotle, more than three hundred years before Christ, different parts of the brain have been supposed to perform distinct functions. Indeed, the proposition seems to me self-evident—a truism which every one's observation must illustrate. We cannot look (nor can a child or an animal) at the head and face of a human being without instantly recognizing certain leading traits of character. We may be sometimes mistaken, but we invariably associate in our minds his more prominent mental faculties and propensities with the size and shape of the different

parts of his head and face. It may be objected that this is all physiognomy. But as physiognomy is only the facial expression of the mental organs, the objection amounts to nothing.

All anatomists agree that the size of the cerebrum measures the intelligence of the individual; that the size of its upper front portion corresponds with his reasoning capacity; that the size of the lower front portion indicates the ability of his perceptive intellect; and that the size of the upper and back portions of the brain-substance indicates the intensity of the emotions and passions. Herein we have the admission that the same portion of the brain cannot both think and feel; and this admission settles the whole controversy. But it is admitted further, that the reflective faculties do not think as the perceptive faculties do, which means that they do not recognize the same objects or relations. Then why not subdivide the reflectives and perceptive into distinct organs having special relations to external objects, as well as divide the intellect into a reflective and a perceptive portion? We have exactly the same grounds for making the subdivision as the division. And then, if the intellectual portion of the brain is divisible into different functional parts, why not also the affectional portion?

Aristotle recognized these distinctions. Bernard Gordon, in 1296, made a division of the brain organs very similar to that of Aristotle. In the thirteenth century, Albert the Great

mapped out the seat of the different intellectual faculties. Servetus divided the brain into distinct mental organs. Peter Montagna, in 1493, published an engraving which recognized a similar division. A head by Ludivico Dolci presents a similar arrangement. Dr. Thomas Willis, in 1681, divided the brain into several distinct organs. Swedenborg intimated the theory, half a century before Gall wrote, that the brain consisted of a plurality of organs. We see, therefore, that whatever may be true or false respecting the details of Phrenology, that one of its principles which is now disputed has been recognized and taught ever since anatomy was systematically studied.

Such are the historical data applicable to our subject. Prominent among the text-books on physiology in our medical colleges is that of Prof. John C. Dalton, Jr., M.D. ("A Treatise on Human Physiology"), in which work the arguments *against* Phrenology are presented with as strong an array of facts (and a stronger array of assertions) as in any work with which I am acquainted. I propose, therefore, to regard Professor Dalton as the representative or champion opponent of Phrenology, and to reply to his facts, arguments, and assertions.

In introducing the subject to his readers, Professor Dalton says: "We shall not expend much time in discussing the claims of Phrenology to rank as a science or as an art, since we believe that it has of late years been almost wholly discarded by scientific men." And then, after devoting two whole pages to a discussion of the subject, the professor concludes: "While Phrenology, therefore, is partially founded on acknowledged physiological facts, there are yet essential deficiencies in its scientific basis, as well as insurmountable difficulties in the way of its practical application."

Now, as Phrenologists are constantly surmounting these insurmountable difficulties without difficulty, I propose to show that Professor Dalton's objections are neither insurmountable nor in harmony with the science of physiology, which he proposes to teach.

Professor Dalton's objections may be all summed up under three heads:

1. More comparisons and observations are required to establish the science than Gall and Spurzheim could have made in one life-time.

2. The gray matter of the brain has no anatomical divisions or limits, corresponding to the supposed phrenological organs, as have the ganglia which pertain to particular parts of the nervous system.

3. The convolutions of the gray matter of

the brain penetrate deep into the central portions of the brain, and cannot, therefore, be measured by external manipulations.

With regard to the first objection, it is enough to say that the question in issue is one of fact, not of time. The problem to be solved is, does the brain consist of a plurality of organs? not, how long has the subject been studied?

But if Professor Dalton wants to read the historical data for himself, he has only to look through "Dunglison's Physiology" (a work contemporaneous with his own). In that work he will find ample evidence that the needed observations have been accumulating for more than two thousand years.

For conclusive evidence that different portions of the brain exercise different functions, I will refer Professor Dalton to his own book. On page 426 is a cut representing two Aztec children, a boy and a girl, aged respectively seven and five years of age. The foreheads are so low and sloping that any Phrenologist would, at the first glance, pronounce them idiotic in the reflective intellect (reasoning powers), while the perceptive range is quite prominent. Now mark what the Professor says of these children:

"The habits of these children, so far as regards feeding and taking care of themselves, were those of children of two or three years of age. They were incapable of learning to talk, and could only repeat a few isolated words. Notwithstanding, however, the extremely limited range of their intellectual powers, these children were remarkably vivacious and excitable. While awake they were in almost constant motion, and any new object or toy presented to them immediately attracted their attention, and evidently awakened their lively curiosity. They were accordingly easily influenced by proper management, and understood readily the meaning of those who addressed them, so far as this meaning could be conveyed by gesticulations and the tones of the voice. Their expression and general appearance, though decidedly idiotic, were not at all disagreeable or repulsive; and they were much less troublesome to the persons who had them in charge than is often the case with idiots possessing a larger cerebral development."

Idiots may possess a larger cerebral development, that is, a larger mass of brain, and yet have smaller intellectual organs than the Aztec children. They would be more idiotic intellectually, but less idiotic affectionally. They

might have normal feelings, emotions, sentiments, and passions; yet without intellect to guide and direct them, their manifestations would necessarily be, to a great extent, abnormal and erratic.

Dogs, cats, sheep, horses, cattle, monkeys, and elephants, whose reflective organs are small, or merely rudimentary, answer precisely to Professor Dalton's description of the Aztec children. They have a comparatively large development of the merely observing portions of the brain, but are idiotic (compared with man, in the reasoning powers. The expression and general appearance of animals (except the predacious kind) are not disagreeable or repulsive, because the idiotic expression of their reasoning organs is their normal state, and is what we are accustomed to; but if we had been accustomed to see animals with high and broad foreheads, and this surmounted and crowned with a group of moral organs, with a facial expression, or Physiognomy, manifesting to us the activity and power of these reflective and moral organs, the sight of an ordinary dog, horse, cow, or sheep would doubtless be as repulsive as is that of the most demented idiot ever known.

The Aztec children were fairly developed in the perceptive intellect; hence their vivacity and curiosity. And now, when Professor Dalton will find any person whose head is very small in the region where Phrenologists locate Causality and Comparison (no matter how much brain he may have elsewhere), and who is a good reasoner, then he has one fixed fact to urge against Phrenology. If he had found the Aztec children capable of reasoning, and destitute of vivacity, and the disposition to notice things, he would then have had a fact against Phrenology; but, as the case stands, all of his facts are, "on the contrary, quite the reverse."

And now to the second objection. The gray matter of the brain has no anatomical divisions or boundaries, for the reason that it is a "unity in diversity." The brain, as the organ of mind, is a unit. The brain, as related to different objects and diverse functions, is a plurality of organs. The ganglia of the nerves are appropriated to various organs of different functions, or serve as reservoirs and distributors of nervous energy. The vital organs are not intimately associated in functional action as are the mental. The nervous ganglia may be compared with ten thousand electro-magnetic batteries scattered all over the world, each managing the telegraphic wires in its own vicinity.

The brain may be likened to a telegraphic head-quarters, or general office, where the ten thousand batteries report and concentrate; and the brain-organs to the persons or officers who manage the general office. It is no objection to this theory that we cannot see the functional divisions of the brain anatomically. The anatomy is too fine for our vision, as is the constitution of protoplasm, or the structure of the primordial cell, or the shape of the ultimate atom of matter.

That the different portions of the brain may have different functional recognitions (special relations to external objects), and yet have no anatomical divisions, that our senses can recognize, is no more of an insurmountable difficulty than that the skin should have different manifestations of function in different parts. The skin is a unit—a homogeneous structure. As a whole, it is the organ of touch. There are no anatomical limitations or divisions anywhere to be found. Yet its feeling or sensibility is very different in different parts, both in degree and kind. The sensibility of the scalp is very different from that of the soles of the feet; and the sensibility of several other parts of the surface is different from either, and from each other. The skin exercises no function but feeling, yet one part feels differently from another.

The brain feels and thinks, yet one part feels or thinks differently from another part. This is essential to associated feeling or rapidity of thought. If the brain, as a whole, had to take cognizance of the properties of bodies—their form, distance, color, size, direction, number, relations, etc., thinking would be a slow, and education a tedious process. But as it is, each appreciably distinct property of matter is recognized by a different organ, so that all are appreciated instantly.

This principle is further illustrated in the action of the external senses. Physiologically they are all feeling organs. The eyes, ears, nose, and tongue feel as well as the skin; but how differently! Why? Because they are related to different objects. I use language here in its common acceptation. The reader will of course understand that I mean, the organs of the external senses are the media or instruments by which the mind or being recognizes objects. In this sense the eye feels (notices or recognizes) the qualities of objects at a distance—form, size, color, etc. The ear feels (notices or recognizes) the motions of a distant body. The nose feels the molecular properties of bodies. The tongue feels the organic relations of matters in contact.

Now, although the skin is the general organ of touch, to prove that different parts of it exercise particular kinds of sensibility, one has only to manipulate his own surface in different places. And, although the brain is the general organ of mind, to prove that different portions of its substance perform different functions, one has only to manipulate the head (or body even) so as to call different parts of the brain into exercise. Whatever errors there may be in the details of Phrenology (and no one pretends that its art is yet perfected), the rule will be found universal and invariable that large developments of certain portions of the skull are attended (other circumstances being equal) with corresponding manifestations of mental power.

Another fact, not often mentioned by Phrenologists, and never answered by their opponents, yet in itself conclusive of the truth of Phrenology, is the motion of the head corresponding with and in the direction of that part of the brain which is in active exercise. This may be noticed more prominently when organs are excited singly. When several organs are combined in actions, the motions of the head are less apparent, or too various to be easily referred to particular organs or sets of organs. A man, or an animal, when angry, moves the head from side to side (shakes it) in the direction of Destructiveness. When a mother fondles her child, she moves the head in the directions of Philoprogenitiveness and Mirthfulness; that is, backward, and then forward, with an inclination first to one side and then the other. Who does not know that a person with large Firmness stands fast and immovable, with lips compressed and fists clenched; and that a person with large Self-esteem "carries his head high?" Who ever saw an excessively vain person whose upper and back portion of the head were not moving (rolling, not shaking) from side to side when he was talking about himself? Was a person ever terribly frightened without instantly inclining the head in the direction of Cautiousness?

All of these facts are matters of common observation and universal experience. How are they to be explained? They never have been explained by those who persist in the theory that the brain acts as a whole in each mental process. Phrenology solves the mystery, and makes the whole matter as rational and intelligible as are the facts that the various portions of the bodily structures perform different functions.

The third objection appears more formidable

at first glance; but it has been so many times answered by Physiologists as well as Phrenologists, that I wonder that Professor Dalton should have presented it. I am afraid he has not thoroughly "read up" the works of his contemporaries.

Vital organisms develop from within, outward—from center to circumference. This is an invariable law. The frame-work of the body, in all stages of development and growth, corresponds with the organs and structures. The bony walls of all parts are adapted to their contents. They grow or decline with them, as the skin of the surface, or the bark of a tree, does with the structures within. "All are but parts of one stupendous whole" in the vital processes.

The bones of the cranium, which constitute the walls which inclose, sustain, and protect the brain, are developed with the brain, as every anatomist knows; and they are developed according to the dimensions of its various parts. The convolutions of the brain, unfolding from a central point, where they are joined to, and connected with the vital organism, enlarge the whole skull, according to the size of the whole brain, and enlarge particular portions of the skull according to the size of particular portions of the brain, thus making the anatomical basis of the Phrenological organs. No matter how deeply into the substance of the brain the convolutions extend, their functional expression is on the surface; and these, when large, will be indicated by fullness or prominences of the corresponding portions of the skull.

Professor Dalton should be reminded that the "bumps" or protuberances, with well-defined depressions or valleys between them, as shown in the "Symbolical Head" of the phrenological teachers, have only an ideal existence. The symbolical head (as the term indicates) is so constructed as to show the location of the Phrenological organs, or rather the places on the skull where development corresponds to and indicates development of the organs. If a Phrenological organ were located in the very center of the brain, and without any connection with its surface, its greater or lesser size would necessarily cause a corresponding development (and a depression or prominence in extreme cases) in some portion of the skull. The only question is, whether we can ascertain where and how its development is manifested by the cranial bones—a question which does not affect the truth of Phrenology as a science, and is only applicable

to its accuracy as an art. The simple statement of the obvious principle that the configuration of the cranial bones must, of necessity, correspond with their contents, ought alone to be a sufficient answer to the objection we are considering.

Were the brain divided into distinct portions anatomically, as Professor Dalton seems to think should have been the arrangement if the organs were intended to be multiple, the unity, harmony, co-operation, and intimate association of the various mental processes would be destroyed. For the purposes of human life it is often important that one organ or mental power should be exercised alone and intensely. On other occasions, two, five, or ten may be associated in action; and these actions, singly or variously combined, must be rapidly changed. And for this purpose—to allow the greatest action with the least possible friction—the brain-substance is semi-fluid, eight-tenths being water. Were the more solid structures—the muscles and nerves, for example—subjected to such rapidity of action, they would soon wear out.

There is, indeed, more or less sympathy or associated action among the vital organs. They all co-operate in the nutritive processes, although each organ performs a special and distinct office in the process of nutrition; but in their moribific conditions they act each for itself, according to the first law of self-preservation. And in all cases their associated or antagonistic actions are extremely slow as compared with the mental processes.

Existence itself depends on rapid, instantaneous, associated, and often-changing actions of the mental organs. Almost every adult person has many times been placed in circumstances of "accidents and emergencies" wherein, if his mental processes and the combined action of various organs could not take place quicker than conscious thought, life would be lost.

We may compare the brain, as a whole, to the commander-in-chief of an army, and the various parts of the brain to the various divisions or sub-commanders of the army. The general must manage his army (which is a unit) so as to preserve all of its divisions (its multiple organs) if possible, and its most important parts at all events. Hence he takes a position where he can survey the whole field of operations, and regulate every part. The army is a unit (a single organ) as against the enemy; but it is very diverse (a plurality of organs) in the work of each regiment or company.

In the battle of life (the war between organic relations on the one side, and mechanical forces and chemical affinities on the other), the brain is the grand army—the mind, soul, or spirit is the "generalissimo." The commander-in-chief must so regulate and direct the various divisions of the army (the organs) that their relations to the objects which they are constituted to take cognizance of shall conduce to the preservation of the whole domain of life. The "enemy" is the sum total of external objects and all surrounding influences except normal agencies. Now, if an army were obliged to act as a whole in each of its operations, a war would be one of the absurdest things imaginable. If the whole army had to go on foraging excursions, had to undermine a wall, or assault a fort, or attack an advancing column, or remove the wounded, or cook the victuals, or transport the baggage, war would be impossible, except on an extremely limited scale. But we all know that in wars (especially as now conducted between civilized and *Christian* nations) special duties are assigned to particular divisions of the army.

And if the whole brain (all its parts and organs) were obliged to perform successively the duties that are now performed by different parts simultaneously, mentality would be an absurd affair. It would be simply impossible, except on a very limited scale.

OUR TITLE-PAGE.

BY MISPAH.

If pictures spring from poets' brain;
If visions ever bless;
If Fancy, and her courtly train,
With modest arts, caress;
If Heaven and Earth combined in one
A sacred symbol forms;
If Woman in her sphere had won
The trust she there adorns,

Then, on those forms, in beauty wrought,
Where Art with Love entwine
A wreath, with inspiration fraught—
Fore-shadowed love divine;
Then, unto woman it was meet
To crown that brow for fame;
That progress shall each soul complete,
To glorify His name.

Hence, from the highest scenes of grace,
Her mission brings its part;
Her angel-presence, face to face,
Shall sanctify the heart.
And ever may the angel wings
Brood o'er that little band,
While the whole world in chorus sings
Their works throughout the land.

PHRENOLOGY—ITS PRINCIPLES, PROOFS AND USES EPITOMIZED.

PHRENOLOGY, which signifies "*a discourse on the mind*," is either true or false. If true, it is of great importance; if false, it should be disproved and repudiated. Some have condemned it without a hearing; others have accepted it without knowing enough of its principles or its history to explain or defend it; still others—a few, comparatively, of the great aggregate—have carefully learned its history, philosophy, and uses, and become its advocates and friends.

PRINCIPLES OF PHRENOLOGY.

Phrenology claims to explain the powers and faculties of the mind, by studying the organization of the brain during life. Its chief doctrines may be briefly stated thus:

1. The brain is the organ of the mind.
2. The mind has many faculties, some of which may be stronger or weaker than the rest in the same person.
3. Each faculty or propensity of the mind has its special organ in the brain.
4. Size of brain, if the quality be good, is the true measure of its power. The brain when deficient in size or low in quality is always connected with a low degree of mental power. Among the lower animals the brain is found to be large and complicated in proportion to the variety and strength of the faculties.
5. Organs related to each other in function are grouped together in the brain. For example, the organs of intellect are located in the forehead; those of the social nature, in the back-head; those of passion, appetite, and self-preservation, in the side-head; those of aspiration, pride, and ambition, in the crown; and those of sentiment, sympathy, morality, and religion, in the top-head. A correspondence is to be traced here between the location of the groups and their respective importance in the ratio of human mentality.
6. As each function of the body has its specific organ, so each faculty of the mind, each sentiment and propensity, has its own organ. If this were not so, each person would exhibit the same amount of talent or power on all subjects, such as arithmetic, language, music, mechanism, memory, reasoning, love of property, courage, prudence, pride, etc. Everybody knows that persons rarely show equal talent on all topics. A man may be a genius at one thing, and find it impossible, by long training, to become even respectable in other things. This would not be the case if the mind

were a single power and the brain a single organ. As the senses of seeing, hearing, tasting, smelling, etc., are not always possessed by each person in an equal degree of perfection—these several powers being dependent on different organs—so the mental faculties and dispositions are sometimes very unequal in a given person, owing to the greater strength or weakness of their respective organs in the brain. Partial genius, partial idiocy, and partial insanity strongly sustain the phrenological theory of the mind; indeed, the abnormal mental conditions such as these clearly demonstrate its truth.

7. The quality of temperament of the organization determines the degree of vigor, activity, and endurance of the mental powers. These temperaments are indicated by external signs, including the build, complexion, and texture; and may be comprehended to a greater or less degree of perfection by every intelligent person.

There are three temperaments, known as the Vital, Motive, and Mental.

THE VITAL TEMPERAMENT is evinced by large lungs, a powerful circulatory system and large digestive and assimilating organs, abundance of blood, and animal spirits. This temperament is a combination of the *Sanguine* and the *Lymphatic*, as set forth by Mr. Combe and other writers; but as the digestive and assimilating organs, which constitute the Lymphatic Temperament, together with the respiratory and circulatory systems, which constitute the Sanguine Temperament, are really VITAL organs, we regard their combination into one, under the name of VITAL TEMPERAMENT, as both convenient and philosophical. This condition of the bodily system produces ardor and impulsiveness of mind, a tendency to passionate enjoyment, social affection, warmth of temper, cheerfulness, and a desire for active, practical business.

THE MOTIVE TEMPERAMENT, corresponding to what is otherwise known as the *Bilious*, has a strong bony system, an abundance and hardness of muscle, dark wiry hair, dark eyes, rough, prominent features, dark complexion, and a great disposition to locomotive effort.

The Motive Temperament in its influence on mental manifestation is favorable to dignity, sternness, determination, power of will, and desire to govern and control others. It gives slowness of passion but great perma-

nency of disposition, sternness, and strength of thought but not brilliancy, and a desire to engage in heavy labor or large business operations.

THE MENTAL TEMPERAMENT (formerly called Nervous) depends on the development of the brain and nervous system, and is accompanied or indicated by mental activity, smallness and fineness of muscle, light frame, thin skin, fine hair, delicate features, and a large brain as compared with the body. As this temperament conduces to a delicacy of body, it also imparts a peculiar sensitiveness and vivacity to the mind, a disposition to think, study,

and cultivate art, or follow some light and delicate business.

The structures which, in excess, determine these temperaments exist in each individual. In one person one temperament may predominate—in the next, another. They can be, by proper training, essentially modified, particularly in youth.

The object which the true Phrenologist has in view is the instruction of his fellows in the things relating to themselves, so that they may train and discipline their own characters in a normal and efficient manner.

THE SALMON AND ITS CULTURE.

THE salmon (*salmo salar*) is familiarly called "the King of the Brooks," and is justly regarded as the finest of all fish found in fresh water. He attains the largest size; his flesh is of the best quality, and is most

contain all the salmon left upon our Atlantic sea-board. They were greatly depleted even in the rivers of the British possessions; but there the government early took the alarm, and measures were adopted to check the

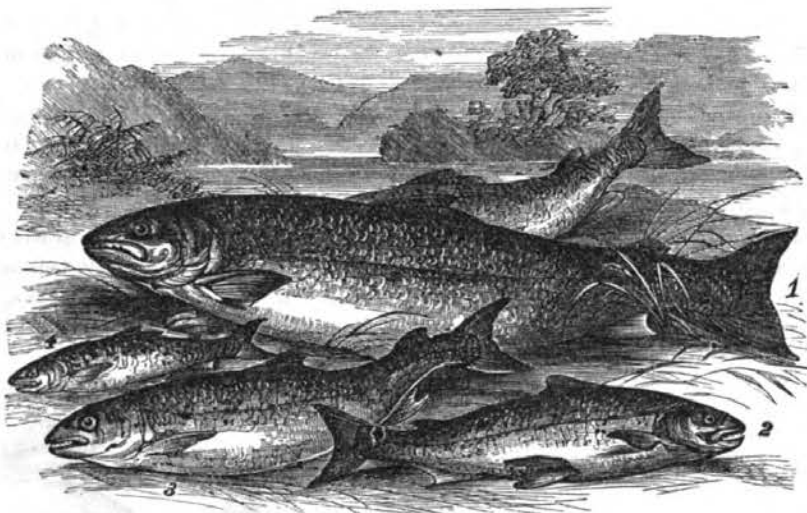


FIG. 1.—FISHES OF THE SALMON FAMILY. 1. Salmon; 2. Grilse; 3. Sea Trout; 4. Herling.

highly prized in all lands. It is hardly possible to believe that a fish, now so scarce as to command a dollar a pound, at some seasons of the year, was once the most plentiful of all fish upon the Atlantic coast, and the common food of all classes. All the rivers east of the Hudson of any considerable size were swarming with them, and this plenty continued for many years after the first settlement of the country. Cut off from their breeding grounds by impassable dams, they have disappeared from one stream after another, until a few large rivers in Maine

wholesale destruction of this fish. For the last few years there has been a steady increase of salmon in all the Canadian streams, and the young fry are now sent out in such numbers from the government hatching-house at New Castle, that it will not be many years before salmon will be more abundant than ever in all their rivers.

Our neighbors are far in advance of us, although they have no better streams than our own, and no sources of information upon this improvement that are not accessible to us.

NATURAL HISTORY OF THE SALMON.

The large fish, weighing fifteen or twenty pounds, which we find at the fish-monger's stall, begins his life in a salmon ridd near the head waters of the river. If the parent fish find no obstruction, they will push their way far up into the mountains, into streams not more than a yard wide, to find a suitable place to deposit their spawn. Although the eggs are not dropped until No-

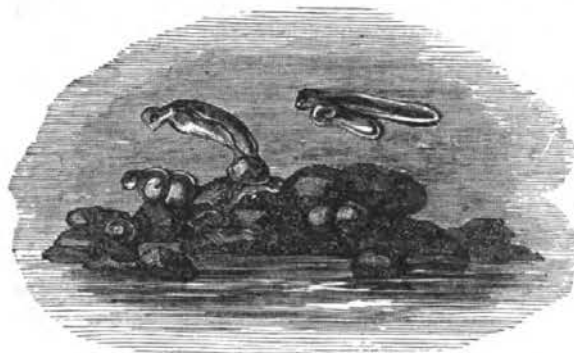


FIG. 2.—EGGS OF THE SALMON JUST HATCHING.

vember, they come into the large rivers early in the spring, lingering for weeks or months about the estuary. As each branch of the river has its own family of salmon, and they return with great uniformity to their birth-place to deposit their spawn, it is supposed that those who have the longest journey to make come first into the river. The males reach the spawning ground first, and begin to prepare the ridds or beds for the laying of the eggs. This is only a few days before the approach of the females. The place selected is a gravelly bed, just below a fall or swift running water. When the gravel is abundant and the water favorable, they do not go so far up the stream. They begin to burrow into the gravel, and make the stones as clean as possible. These ridds are readily perceived, in any good salmon stream, in the latter part of October. The fish is fastidious about its spawning bed, and the localities in the river which are just right for this purpose are liable to be visited by large numbers of breeding fish, and the same spot to be repeatedly used by successive pairs. The gravid fish appears soon after the male, and completes her preparation for spawning. They may be seen lying in pairs near the bed

or upon it. At the moment of ejecting the spawn the male is at her side, and simultaneously deposits his milt. The eggs adhere for a time to the gravel, and this facilitates the process of impregnation. The male retires immediately after the eggs are dropped, and the female covers her spawn by brushing the gravel upon them with her tail. This completes the care of the parent fish for their offspring. They may be disturbed by another

pair of breeding salmon or trout, be plowed by floating cakes of ice, or be smothered in the mud by freshets. By far the larger part of them are sure to be destroyed. At the time of the laying of the eggs the water is near its winter temperature, and remains so until the following March. At New Castle the eggs hatch very uniformly the latter part of April—five months from the time they are laid. The period of incubation is determined by the temperature of the water. The young fish do not make their appearance until the

water grows warm, and begins to swarm with insect life. The fry, as it emerges from the egg, is a very awkward looking creature, with a large oblong sac (Fig. 3) beneath the gills, which sinks immediately among the gravel, and is hardly perceptible to the careless observer. (Fig. 2.) This sac contains the food of the fish for five or six weeks, and at the close of that time is nearly absorbed. They

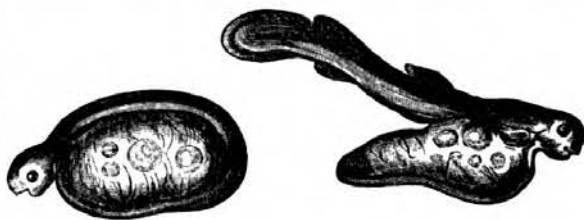


FIG. 3.—SALMON A DAY OR TWO OLD.

now begin to feed, and after a few months assume the appearance shown in the illustrations. At this stage of their growth, and until they prepare for sea, they are called parr. They do not grow so rapidly as trout, and are hardly to be distinguished from the young trout until they are a year or more old.

The second May after they are born, or when about fourteen months old, about half the shoal begin to turn a silver-gray, prepara-

tory to their visiting salt water. The instinct to go to sea is so strong in them that it is difficult to keep them in confinement where they are artificially bred. They manifest the greatest uneasiness, jumping out of the water, and even upon the shore. If the sluice-way of the pond is opened the smolts will all leave, and the remaining half of the shoal remain in fresh water another year. (Fig. 5.) This very curious instinct seems to be a pro-

marked spawned grilse as near as we could get to four pounds weight; these we had no trouble in getting with a net in the pools below the spawning beds, where they had congregated together to rest after the fatigues of depositing their seed. All the fish above four pounds weight, as well as any under that size, were returned to the river unmarked, and the others marked by inserting copper wire rings into certain parts of their fins.

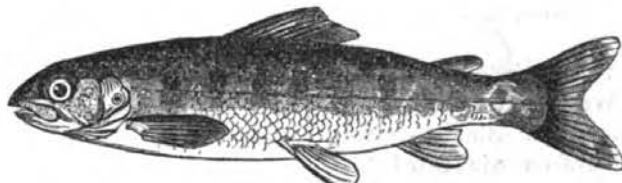


FIG. 4.—PARR, ONE YEAR OLD, HALF THE NATURAL SIZE.

vision of nature against the extinction of the race. The male parr, it has been ascertained, are fertile, and if there are no male grilse or salmon, they will couple with a gravid female just returned from the sea. The destruction of all anadromous fish, it is well known, is enormous while at sea, and if it should happen that all the males in the sea belonging to a particular stream should be cut off, and only a single female escape, she would find plenty of males to meet her upon the spawning bed. It is well known that the males are the first to enter any river, and they receive the brunt of the battle with the enemies that await them.

This was done in a manner so as not to interrupt the fish in their swimming, nor be troublesome in any way. After their journey to sea and back again, we found that the four pound grilse had grown into beautiful salmon, varying from nine to fourteen pounds weight. I repeated this experiment for several years, and, on the whole, found the results the same, and, as in the former marking, found the majority returning in about eight weeks; and we have never among our markings found a marked grilse go to sea and return a grilse; for they have invariably returned salmon." At each subsequent return to the sea, after visiting the spawning beds,

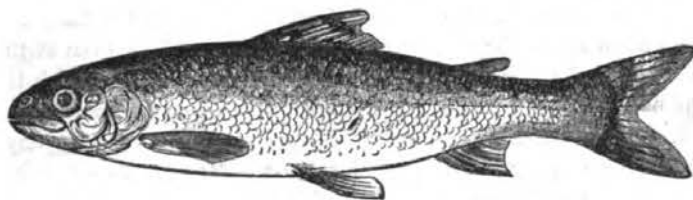


FIG. 5.—SMOLT, TWO YEARS OLD, HALF THE NATURAL SIZE.

It is not quite settled how long the smolt remains at sea. It is probable, however, that the males, or a part of them at least, return the same season, in June, to visit the spawning beds. The fish of four or five ounces comes back weighing as many pounds, and is then called a grilse. They remain stationary, or fall off only while in fresh water. The grilse becomes a salmon on its next visit to the sea. Mr. Young, in his work on the salmon, an English authority, says: "We

there is a large increase in weight. The Duke of Athol caught one of his marked fish, which had gained eleven pounds and a quarter in the short space of thirty-seven days. Formerly salmon were often caught which weighed thirty to forty pounds, but now British salmon seldom exceed eighteen pounds—and the salmon of the Penobscot do not average much over twelve pounds. They are hunted so closely that very few survive their third visit to the sea.

DISTRIBUTION OF SALMON.

This fish is found in nearly all the rivers of Northern Europe; formerly it was found in all the streams east of the Hudson, in our own country, and in most of the streams of Canada, Labrador and New Brunswick. Several varieties are found upon the west coast of the continent. The rivers abound in them from California to Alaska. Marvelous stories are told of their abundance, and the witnesses are so numerous, and so substantially agreed, that there can be no doubt of their truth.

We are not able to say whether the salmon of the Columbia River is of the same species with the *salmo salar* of our Atlantic streams. There is no marked difference in their habits, and their flesh is equally good. California salmon are now sent across the continent by rail, packed in ice, in the winter and early spring, and reach our Eastern markets in excellent condition. Large quantities are canned and sent to all parts of the world. Farther north, on the Alaska coast, there are several distinct species, some of which are highly prized, and many surpass the salmon of our own coast.

The king salmon (*Onchorhynchus orientalis*, of Pallas) is said to be the finest on the coast, weighing from sixty to ninety pounds. This fish ranges from Sitka to Behring's Strait, and is found in all the streams from the Alexander Archipelago to the Yukon. It ascends this great river for twelve hundred miles, and probably much farther. It reaches the mouth of the Yukon about the middle of June, and runs for six weeks. It is dried for winter use by the natives, and forms a large part of their food. One of them is accounted sufficient supply for one day for six men or dogs. The *O. lagocephalus* and the *O. proteus*, of Pallas, are more nearly like the *S. Salar*. They have the same range as the king salmon, and are dried in the same way. They are more common, and held in less esteem. They form the bulk of the better class of salmon in all the rivers of Alaska. They arrive later, remain longer, and travel more rapidly. They are more slender, and, in the breeding season, are armed with recurved teeth, which make them quite formidable to the fishermen. Besides these, there are the red-fish (*O. sanguinolentus*) and the

dog-fish (*O. lycaodon*), of Pallas, and the black salmon (*salmo purpuratus*), which are smaller, less esteemed, and principally used by the natives for dog-feed.

THE SALMON FISHERIES.

The salmon taken in our Atlantic streams are nearly all used in the fresh state, and the supply is very limited. This is also true of those taken in Canadian streams, which are within easy reach of the large city markets. Some are still so inaccessible that they have to be cured, and appear in our markets pickled and smoked. Only about eight thousand salmon are taken in the Penobscot annually, and this is the most productive river in Maine. In striking contrast with this meager product is the overflowing abundance of the north-west coast, and the California streams. It is estimated that the natives of Alaska consume annually twelve millions of salmon. In 1868 about two thousand barrels were packed at Sitka. At Karta Bay three thousand barrels were put up the same year. Large fisheries have been located on the Columbia River for some years. They are taken in gill nets at night; but the yield is much smaller, and the fish are said to be not so fine-flavored as those from the Alaska rivers. Five establishments put up salmon on the Columbia in sealed cans, which preserve the fish perfectly for several years. In 1870, 1,800,000 pounds were put up and sold, at an average price of fourteen cents a pound. This canned salmon is getting to be common in the markets of the East, and makes a reasonably cheap dish, even at the retail price—twenty-five cents—at which it is sold. It is not quite equal to fresh-caught salmon, but is very much better than any form of cured salmon. Bought in quantity, as it can be with perfect safety, it is about as cheap as the ordinary fresh fish of the city markets. If these canning establishments could only be started upon the Yukon, the price might be reduced one half, and fresh salmon of the best quality be placed within reach of all the people. The fish are so abundant upon the Alaska coast that it is said they can be packed and landed at San Francisco at a cost of five dollars a barrel. How much better it would be for the multitude, in all parts of our country, to have the same fish preserved in cans.

ESSAYS AT SALMON BREEDING.

Very little has been done thus far in the improvement of our salmon rivers. The streams best fitted for salmon are quite too large for individual enterprise; and legislation is needed, both to furnish the stock and to protect the fish after they have begun to multiply. In 1857, Geo. P. Marsh, of Ver-

probable that any of this lot ever came to life. A few, however, which the Doctor kept under his own supervision for the purpose of studying their habits, hatched, became smolts, and were turned into the Pemigewasset, at Compton, in the spring of 1868. These, so far as we know, were the first artificially hatched salmon put into American waters.



FIG. 6.—SALMON-WATCHER'S TOWER ON THE RHINE.*

mont, and A. H. Robinson, of New Hampshire, made reports to the legislatures of those States, showing what the nations of western Europe were doing to restore fish to their barren rivers. The success of these efforts has been constantly reported, principally through the papers, and the interest in fish-culture has all the while been growing, although nothing effectual was done in this country until 1866, when Dr. Fletcher, of Concord, New Hampshire, went to New Brunswick for the purpose of procuring adult salmon, and transporting the parent fish alive to the waters of New Hampshire. This was in August, a season of all others most hopeless for such an enterprise, on account of the heat. Later in the same season Dr. Fletcher secured some 25,000 impregnated ova, and put them into the Merrimack, at Woodstock and Thornton, in New Hampshire. As they had no special care, it is not

The following year about 100,000 eggs were procured from the same source. One half of them were distributed by the commissioners to Robinson and Hoyt, of Meredith, N. H., and the other half to Livingston Stone, of Charlestown, N. H. Only 12 per cent. of this lot of eggs were impregnated; and about 99 per cent. of the impregnated eggs hatched. About 10,000 fry were put into the Merrimack the following spring, as the result of this effort. In 1868, the autumn following, Livingston Stone built a hatching establishment on the Miramichi, N. B., where all the eggs had been taken, and brought home 183,000 ova, which were hatched in various localities, but mostly in his boxes at Charles-

* The Rhine is an excellent salmon stream, and yields a large number of fish. The five fishing stations at Rotterdam are very productive, each of them yielding about forty thousand salmon per annum; and it would not be extravagant to estimate the product of these fisheries as of the value of £25,000 per annum.

town. These were mostly put into the Merimack; but small lots went into the Mystic River, and into small streams upon Cape Cod, into West River, and the Winoski, Vt. The next year Mr. Hagar, the Vermont commissioner, secured about 40,000 ova from the same river, and these developed well, and were put into Vermont streams. Only 8,000 ova in good condition came from the Miramichi the following season, and these were mainly put into the waters of Maine and Connecticut. Small lots also were procured

parent fish. The head waters of the Penobscot, where the fish spawn naturally are in a wilderness, and the difficulties of taking and developing spawn there in the winter are very great. It, therefore, seemed best to Mr. Atkins to buy live salmon of the pound fishermen, to confine them in brooks through the summer, and take the spawn in November. This had never been done, so far as he knew, but the success of the Poquonnoc Fish Company the previous year with the land-locked salmon, at Grand Lake Stream, afforded

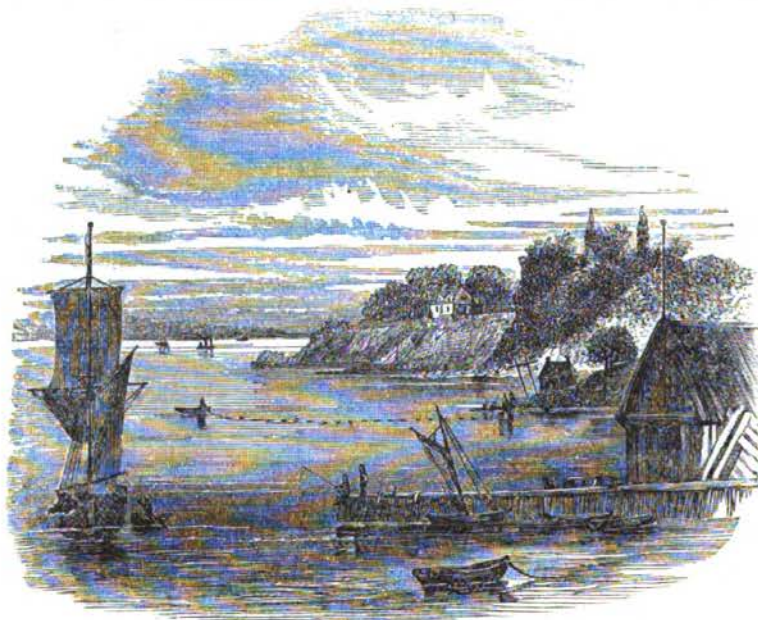


FIG. 7.—SALMON-FISHING STATION AT WOODHAVEN-ON-TAY.

this season from Mr. Samuel Wilmot, who has the care of the Canadian salmon hatching establishment at New Castle, on the north shore of Lake Ontario, for Maine and Connecticut. The high price of ova—forty dollars in gold—prevented any very large purchases.

In the fall of 1871, 72,000 eggs were taken at Orland, Maine, by Charles G. Atkins, fish commissioner of Maine, principally for Maine, Massachusetts and Connecticut, and the Poquonnoc Fish Company. The association employed Mr. Atkins to superintend the enterprise, and it could not have fallen into better hands. This, so far as we know, was the first attempt to take salmon spawn in our own territory. It was accompanied with many hazards, and with large loss of the

strong presumption that the *salmo salar* would bear similar confinement. Of the 102 salmon purchased for breeders, the large majority died, owing to preventable causes—some were swept away in a flood, and less than a dozen females remained to furnish spawn. The spawn were fertilized by the dry method, and about 96½ per cent. proved to be impregnated. The cost of the eggs to the parties was about \$18 per thousand, notwithstanding all the difficulties encountered in an entirely new enterprise. All the parties concerned, in this first attempt to secure salmon spawn in our own waters, are very well satisfied with the result, and are convinced that we have now the means of supplying an abundant stock of salmon spawn for our rivers. The knowledge we have

gained is worth much more than the spawn for this year. Mr. Atkins thinks the following points are affirmatively settled by the experiment:

1st. That salmon can be kept in confinement in a small inclosure from June to November.

2d. That they will, under such conditions, develop their spawn and milt to perfect maturity. It has also determined the conditions of safety in transportation, and to a sufficient extent for practical purposes, the conditions of safety in keeping them through the summer; and, finally, the best mode of manipulation to secure complete fecundation. The development of the sexual functions was apparently complete and normal, with the single exception of one of the females; and this was not owing probably to confinement. In all other cases the eggs were ripe at the ordinary season (November 1st to 10th). They flowed freely from the fish, and, so far as we could judge, there was no imperfection about them. The males yielded an abundance of milt. The sexual instincts were strong. The males sought the society of the other sex, as we could observe in the case of several pairs that were placed, after partially stripping them, in a small pond in the brook. Even after we had taken as we supposed all their eggs, the females would burrow in the gravel, like the wild fish, as though that was a job they had undertaken, and would not be prevented from completing.

As to the conditions of keeping salmon in safety through the summer, my conclusions may be briefly stated thus: Salmon will live in perfect health in common river, pond, or brook water, provided that there be sufficient change to prevent stagnation, that the depth be not less than four feet, that they be not too much crowded, that the bottom be not newly submerged, that the water be not too transparent, and, in the case of a brook, that there be not a large per centage of the water from springs in the immediate vicinity. It is necessary, of course, that the salmon should be in good condition when placed in the inclosure. I have no doubt that some of the salmon that died in the pound, died from injuries received in capture and transportation, although Mr. Whitmore was very careful in handling them.

Of the eggs taken by Mr. Atkins, 21,750 went to the Commissioners of Connecticut, and 5,250 to the Poquonnoc Fish Company. Both these lots were hatched at Poquonnoc with very small loss, developing strong, healthy fish, apparently in as good condition as those coming from fish running free. Great credit belongs to Mr. Atkins and to his assistant, David Dresser, of Princeton, Me., for the successful issue of this enterprise. It brings salmon spawn within easy reach of all our State commissioners, and of any private parties who wish to improve small streams. In the opinion of Mr. Atkins, the spawn can be taken another year at a cost of not to exceed eight dollars per thousand. We are glad to learn that the facilities for taking salmon spawn at Orland are likely to be improved another season on a much larger scale.

SALMON BREEDING BY PRIVATE ENTERPRISE.

The English have a great advantage over us in their facilities for improving rivers by private enterprise. Their large estates sometimes control the whole course of an important stream, and a single individual can reap what he sows; but with our system of small freeholds, it is only a small stream that can be owned by a single individual. But this disadvantage is balanced by the fact that our streams are practically worthless—the fish taken in them with the hook costing more than they will bring in the market. It is not difficult to get the control of streams, by lease, for a term of twenty years or more, at small cost; and an individual or company, with sufficient capital, might in a few years reap a rich harvest from waters now barren. If our people were acquainted with the facts, we have no doubt that many of the fine streams that empty into the sea, and into tide-water east of the Hudson, would very soon be leased, and stocked with salmon fry.

The facts in the case are, that all these streams abounded in salmon when the country was first settled. Rivulets upon the coast of California and farther north, so small that they are partially dry in the summer, have salmon in them. Thomas Ashworth, one of the most distinguished breeders of salmon, in his work on the "Salmon Fisheries of England," says of the Furbogh River: "It is so narrow that a man could easily leap across it in the summer season, at the place where

it falls into the sea; and yet this has a salmon weir, and cribs upon it for catching fish, with a queen's gap of only three feet wide for the fish freely to pass through at all times; but as there is a lake near the source of the river, the fish naturally resort to it, and are bred, and caught in considerable numbers, even in this diminutive salmon fishery. Without the protection which the law affords to the proprietor of the Furbogh, all the fish might easily be destroyed, and the public would sustain the loss of so much food. I will allude to another, the Doochulla stream, of ten feet wide, in which salmon ova have been deposited, and the fish artificially bred. They went to the sea, and have since been caught in considerable numbers. This was done notwithstanding there were in the immediate vicinity larger streams inviting them to enter."

Now, we have numerous streams all along the New England coast, and in New York, that empty into the St. Lawrence and into Lake Ontario, that are available for salmon streams, and might easily be opened to private enterprise. Wilmot's Creek, on the north shore of Ontario, was opened by Mr. Wilmot; and when he had demonstrated the entire feasibility of growing large salmon in it in great abundance, it was leased by the government for the purpose of restocking Canadian rivers. It is only about ten miles from the source of this stream to its mouth, and is no better for this purpose than a multitude of streams along our coast. Our legislatures are inclined to patronize fish breeding, and almost any protection that is needed to encourage the art can be secured on application. The great drawback to these enterprises has been the cost of the ova—\$40 per thousand, in gold. But this, we are confident, has now been overcome; and in a very few years, salmon spawn will be as cheap as those of trout, and, possibly, it may become as cheap as it is at the governmental establishments of Europe, where it sells for about one dollar per thousand.

GOVERNMENT FISH CULTURE.

What is now very much needed to help forward this business in our country is the patronage of the general government. We are glad to know that the attention of Congress has been called to the subject. At the

the annual meeting of the Fish Culturists' Association, at Albany, in February, a memorial was drawn up and signed, requesting Congress to establish salmon-hatching works at Puget Sound, and a shad-hatching establishment at some convenient point near the Atlantic coast. The memorialists claimed that the national government alone could undertake and successfully carry out plans for repopulating navigable rivers with food fish, in view of the fact that most of the navigable rivers formed the boundaries of, or passed through more than one State. Mr. George Shepard Page, of New Jersey, was made chairman of the committee appointed by the association to present the memorial to Congress. He appeared before the Committee on Appropriations on the 22d of March, accompanied by Hon. W. P. Frye, M. C. of Maine, and Mr. Charles A. Walker, of the Peabody Academy of Science, Salem, Mass. Prof. Spencer F. Baird, of the Smithsonian Institution, the distinguished commissioner of the sea-coast fisheries, was present by invitation from Gen. Garfield, chairman of the committee. Mr. Page gave a concise and full account of the results attained in Canada, England, Scotland, Ireland, France, Norway, Sweden, Germany and Russia, by their respective governments, in stocking public waters with salmon, trout, and other food fish. He referred to the rapid increase of fish culture in the United States, stating that over a million dollars were now invested; and explained the process of fish hatching, and the small expense necessary to place a half-million salmon and fifty million shad in the public waters during the present year. Prof. Baird fully indorsed these statements, and earnestly urged immediate action.

We need this action, not only to furnish seed for the rivers, but to protect the streams when they are stocked. With a salmon-hatching establishment upon the Pacific coast, it would be an easy matter, not only to furnish spawn of the California salmon, but of the king salmon, and of the other fine varieties of the *salmonida* along the Alaska coast. There is very little doubt that these can be naturalized upon the more northern streams of the Atlantic coast. There is very little doubt, too, that shad could be introduced into the Mississippi Valley, and that all

the tributaries of that magnificent stream—the Father of Waters—could be made to swarm with this excellent fish. With a shad-hatching establishment upon the Delaware or the Susquehanna, it would cost the govern-

ment but a few thousand dollars annually to put a billion of young shad into the streams west of the Alleghanies. What a magnificent present to the coming millions of that great valley of the continent! W. CLIFT.

Department of Our Social Relations.

Domestic happiness, thou only bliss
Of paradise that has survived the fall
Thou art the nurse of virtue.

WORDS OF AN OLD CLOCK.

THE human mind is so constituted that it *must* have relaxation, and this it finds in various amusements, which, be they ever so trivial, serve to turn the mind from the even tenor of its way, as a pebble or a straw often alters the course of some plodding stream.

But I'm moralizing, and that is not in my line at all. I commenced with the "human mind," and here I am now, sitting on a pebble and stopping a stream with a straw. Dear, dear, what "devious paths" this pen does stray into!

To go back to amusements. Did you ever cut your wisdom teeth? Don't, I beg, with the vain desire of seeming facetious, ask if *that* is the "amusement" to which I refer the "human mind," for it was such cutting work that all "sharp" remarks are blunt in comparison.

I wonder whether the descriptive epithet "thick-headedness," as applied to a person's mental powers, includes the gums!

It was *such* a week's work for those teeth of mine to come out, that I, for one, don't like to believe that the gums are included in the head. Yet it would be very inconvenient, not to say unpleasant, to have them excluded, would'nt it?

It was some years ago that I gave up for a time all intercourse with the outer world, and withdrew to the silence and seclusion of my room, that there I might devote myself entirely to the cutting of an obstinate wisdom tooth.

One afternoon the family had gone downstairs to partake of their periodical repast, and I was left alone in the quiet twilight. "Shadows from the fitful firelight danced upon the parlor wall." The rumbling of the heavy drays and the lighter carts was growing more and more faint, and finally a perfect quiet rested in the room. The stillness seemed to settle upon each fold of the curtains, and to

seat itself slowly, with folded hands, upon each figure and spot of the carpet; the quiet grew oppressive; the dull beat and throb of the tortured nerves grew more and more evident. Just ready to cry, I leaned my head on the arm of the chair, when suddenly, "Whirr! whirr! whirr!" and the old clock, so long considered useless, commenced to move its wheels, all clogged, as they were, with the dust of time. In amazement I raised my eyes to the round white face, and, to my horror, saw the minute hand shaking its warning finger at me.

A few moments had done wonders for the hitherto meaningless dial-plate. The "five" had slipped into the middle of the face, making rather a fine-looking nose. It is astonishing how much expression a V gives to a vacuum! The remaining eleven figures had grouped themselves into the most artistic-looking crimps, curls, eyebrows, ears, etc. The thin, smiling lips one would hardly imagine had ever occupied the second place on the face, and the hands, that crossed themselves so daintily, that a modern belle might envy to behold, formerly moved only in the one giddy round, day after day.

This transformation scene was completed in an infinitely shorter time than one would think possible for such an old clock. Perfectly resigned to any new wonder that might appear, I only waited in silence.

"Whirr! whirr! whirr!" came again from the interior of the mechanism, and out of the thin lips came a rusty little voice, saying:

"Dear, dear! it's so long since I've made any remarks, that my throat seems all clogged. If my voice sounds wiry, remember, dear, it's not temper, but natural constitution. I believe I'm strung on wires. I was once employed by Father Time as his teller. I counted, and counted, and counted, till my system was all

run down, and, taking off the weights of my office, he left me in this case for a little rest.

"Many are the wise faces that have glanced into mine with eager interest, to hear and see my opinion on things of moment. Sad faces have looked longingly at me, as my busy fingers reeled off the hours, while others again, (and of these I wish to speak more at length,) have so dwelt, in thought, in the future, that the good of the present has been overlooked.

"I have seen young men, who have spent hours with their eyes dreamily fixed upon me, building castles in the air, whose only foundations were the improbable probabilities of a legacy from the kind-hearted Cræsus of modern novels, who 'goeth about seeking' a chance to give away his wealth in untold amounts, for meager service and time, at the same time letting slip golden opportunities of a higher improvement by hard and honest labor.

"It's all wrong, my dear. We must take our life as it comes, and mold it, hour by hour, into the likeness of our ideal. Life is something that must come gradually. We shall never awaken, some morning, and find ourselves at once to have changed. The power to make ourselves what we will lies nearer at hand than we have ever yet realized, and the unshapely figure of our lives, over which we, at the last, are so prone to mourn, is too often caused by the cessation of that watchful care with which we began our task.

"Between the dark and the daylight is a good time for thought and plans for the future; but once into the light again, live *in* the present for the future. Never day dream, to the exclusion of the real work that lies, like some good fairy, ready to do you a service.

"I have marked time for many a long day, as steadily as an old veteran, though I have not always been a clock. Truly has the poet said, 'A clock may tick and tick, and still be human.' My story is short, but, unlike most moralists, I have given the '*Hæc fabula docet*' first.

"I was once the property of your great aunt."

Meekly I bowed assent, although at that period of my youth *all* my aunts were objects truly great in my admiring eyes.

"For a long time she tended me with the utmost care, till, yielding to her inclination to day dream, she suffered herself to fall into reveries of such a melancholy nature, that, in course of time, she—disappeared. The only conjecture that could be formed with regard to her mysterious disappearance was, that she

had been carried off in a train of thought. Not knowing the stations at which that line makes stoppages, all queries with regard to her whereabouts have proved useless. But"—and here the old clock assumed a most knowing aspect—"we don't tell *all* we know. Rest assured, however, that I have a great interest in you.

"I have spoken thus this evening, because this is a great era in your life. I watched your wisdom tooth when it first made its appearance on the horizon of your gums, a mere speck, no larger than "a man's hand," in the distance. I have more to say, but"—a step was heard on the stair, my lecturer gave another "Whirr! whirr! whirr!" bowed, and was just going on to speak, when—

"Are you awake, daughter?" said mother's voice; and "Your supper's here," said the jingle and tinkle of the glasses and spoons on the dainty tray.

"Why, I believe you've been asleep," said Tom, turning on the gas; "I am sorry we aroused you."

"So am I," was my answer; "I had such an odd dream."

JEANETH HOLM.

EVERY-DAY SCULPTURE.

PROBABLY neither artist nor author, however superior in his special vocation, inspires that reverent, almost devotional homage, which every mind pays instinctively to the sculptor. How often we hear the word Divine! in connection with the works of Phidias, Praxiteles, and Angelo. How, with "bated breath" and rapt attention, we gaze upon their marbles, fancying the eye and hand that fashioned them must own more than human skill.

Yet, every day, nay, every hour, we are hacking away, with whatever weapons come to hand, upon material more precious than the snow-pure marble, more costly than bronze, and more enduring than granite. We give little thought to our tools, little to the material, less to the result, though it is imperishable.

So pliant is this substance that even a look can aid to mold it, a whispered word may stain, or a blow change its expression forever; "clay to receive, marble to retain."

How thoughtlessly, how pitilessly, how weakly, and how wickedly we hack and hew at immortal souls! and, unlike the

sculptor, we have not the prerogative of doing our work first in clay, then patiently and skillfully reproducing only perfect lines and curves in the enduring stone; no, our mistakes and sins against our work have no such remedy. The cruel words that cut so deeply; the feigned love that warmed a heart to melting tenderness, then froze it to ice when the love became no longer amusing or expedient; the falsehoods that stained and marred can never be effaced. The scars and seams made by our weakness or wickedness on the hearts of our fellow-mortals, neither tears nor prayers can erase.

Everything we do or say, nay more, everything we leave undone or unsaid, that would naturally be expected in our position and circumstances, has its effect upon those associated with us. And how careless we are about exerting influence; because we can not

do some grand, vast good to our race, we think we have no field of labor. We forget that often a cheerful, hearty "good-morning" greeting may be the very "cup of cold water" that will keep a thirsty, forlorn soul refreshed throughout the day.

In our indifference or selfishness, thinking we are not "our brother's keeper," we cut and rend the finest feelings of his soul, destroy his trust in human goodness, weaken his faith in Deity, in truth and love and honor, and go calmly on in our own pleasant lives, little thinking, perhaps little caring, that we have helped to distort and destroy what, but for us, would have been a grandly beautiful life, a source of good and joy, a "thing of beauty forever."

Ah! we ought rather strive to make our own and others' lives such as shall gain a "well done" from the Divine Sculptor.

AMELIE V. PETTIT.

ABNORMAL DEVELOPMENT; OR, HELEN ASHFORD'S RULING PASSION.

OLD Peter Goss was a short, thick-set man, with immense, beetling brows, snapping eyes, and a periodic snort, like "Mr. Panks" in "Little Dorritt," a habit so characteristic with him that it signaled approach as perfectly as if he had blown a horn, and invariably warned his wife, "Aunt Polly," in time for her to hide her snuff-box, and clear her mouth before he got in. The old gentleman was further distinguished by a bee-gum style of white beaver hat, a very large and gayly-colored bandana handkerchief, which he had a way of flourishing in the heat of debate, and a big-headed walking-stick, which he was wont to swing in a manner that induced dogs and children to get out of the way when they saw him coming. He cherished the most undoubting faith in his own greatness and superiority to the rest of the world; was far from being ashamed of his humble origin, but rather delighted in boasting how he had risen from utter obscurity by his own abilities. He knew nothing about his ancestors,—cared nothing about them, regarding them only as important in so far as each had played his petty part in eliminating and perfecting *himself*, their offshoot; to whose grandeur they were as subsidiary as the compost fertilizer and spring rain to the proper growth of cotton and corn. So old Peter's favorite theme was how he used to be a "barefooted cow-boy," how a winter ses-

sion at an old field school-house gave him the basis upon which his own exertions built a superstructure of education. How he borrowed the money to attend lectures on, and returned it in plowing and hoeing for six months, doing his preparatory practice, gratis, at the same time, among the negroes.

His next step was to seek the wilds of Michigan, secure a few acres of government land, and go to work as a permanent settler. He worked with a vim and a rush, and in a few years had cleared a good little farm, and established himself in a paying practice. He then married a pretty, soft-spoken woman, whom he found "handy" to look after the poultry, and garden, get his meals and wash his clothes. She bore him no children, and this fact, coupled with his energies and her case, made him well off in a few years.

Ten years after his marriage, Peter heard of the death of his sister Jane, at Albany, and went on there to get her child, a girl, aged six or eight.

Helen Ashford was a pretty, fair faced, sandy haired little being, had a shrewd, independent way of talking, that amused old Peter very much. When he introduced her to his wife, he remarked: "Well, Polly, I've brought home the smartest gal this side of Boston. I'm going to make a great lady out of her. See here, child, your old uncle's going to be powerful

rich some of these days, and if you'll be smart, and real *knowing*, he'll leave it all to you."

This speech, no doubt, made an impression, for Helen very soon developed a precocious propensity for *finding* out things. Two days after her arrival she flustered her Aunt Polly terribly, by saying at the table, "Pappy Peter, Aunt Polly *dips* snuff, and every time she sees *you* coming she hides it." The unwise guardian, instead of reproving the *improper* direction in which his niece's faculty of inquisitiveness was so evidently turning, patted her on the head, praised her smartness, and put her on track of ascertaining if the milk-maid abstracted any milk on her way from the cow-pen, if any of the farm-help embezzled his fruit or vegetables, and if her Aunt Polly was as strict in allowancing as she ought to be.

The inquiring young lady soon raised a tempest about Aunt Polly's ears by *reporting* to her uncle her having surreptitiously sent a large quantity of butter and eggs to town. After that the easy-tempered, dissembling wife was very shy of the shrewd addition to her household; but quite ineffectually, for Miss Helen got into a way of eavesdropping and playing the spy, that enabled her to find out her aunt's most private affairs.

Being sent to school, she made much greater progress in learning to chew sweet gum, find birds' nests, and gleaning news, than in reading, writing, and ciphering. She triumphantly informed her uncle that they "lived better than any of their neighbors, for she had been all round *visiting*, just to see what they eat, and nobody had pies and cakes like themselves." This sally of precocity nearly tickled old Peter to death, he declared she was "too smart a child to be brought up in the woods, and he would send her to a city school as soon as she was twelve years old.

In due time, therefore, the inquiring niece found herself located at Madame Hoskins' Finishing School for Young Ladies. Her uncle had expended a considerable amount in buying "cloth" for her Aunt Polly to make up; but poor Aunt Polly knew nothing about Demorest's modes, or stylish New York patterns, consequently Miss Helen's dresses were terribly *outré* in their cut, and her under-garments made with a fullness approximating the Dutch girls of pristine New Amsterdam. Worst of all, her sandy hair was screwed into an infinitesimal knot of itself, entirely innocent of even the shadow of a chignon.

Her uncle stayed with her one day, bought

her a large paper of candy, and at leaving presented her with five dollars.

The very knowing young lady was quick to perceive the discrepancy in her dress, and that of her companions, and she denounced her "old foggy Aunt Polly," and her "dogged, stingy Uncle Peter," pretty freely to herself for sending her out in such a plight. However, becoming established on a very friendly footing with Mattie Matherson, a fat, good-natured girl, who pitied the "dowdy backwood's tacky." Miss Helen was soon directed to the proper channels for improving her personal appearance, which for a long time occupied her thoughts, to the exclusion of everything else. She was speedily corseted, hooped, panneried, bustled and chignoned with an addition of a huge bunch of *natural* curls, bought of her milliner. Her uncle responding to her demand for a hundred dollars with only fifty, she wrote him a pathetic letter complaining that "everybody knew *he* was a *poor nobody* by his being so stingy with her." Instead of being displeased at his niece's ingratitude and want of respect, old Peter's *pride* took up arms at the possible suspicion of his impecuniosity, and he sent Helen two hundred dollars. As at the old field school, so at the *polishing-mill*, Miss Helen's inquisitiveness did not avail her for the acquisition of useful knowledge. She managed, by surreptitiously looking in her book while reciting, and paying others to *prompt* her, to take a pretty fair stand in her classes, and she evinced a wonderful aptitude in "getting the hang" of things generally. She found out the engagement of one of her classmates, and by threatening disclosure to the teachers, made the poor girl work out all her sums for her, and write her French exercises till the end of the term.

Mattie Matherson, who occupied the same room with her, coming in unexpectedly one day, found her chum very deliberately reading Mattie's letters. She also offended Hester Smith by inspecting, without leave, her private diary.

When "Papa," as she now called Uncle Peter, came after her, she informed him that the august principal, Madame Hoskins, wore false teeth, false hair, a false eye and a cork leg; that the music teacher, Prof. Von Alste, was a morphine eater, and his wife, her German teacher, a "chloral" drunkard. Mr. Goss concluded that he had the *knowingest* niece in the world, and he resolved to make a will, forthwith, in her favor.

Having at length finished her education and

returned to her country home, Helen found time such a laggard in the absence of the sensations and excitement of city life, that she hardly knew what to do with herself. She "got up" some diversion in selecting guests for the big dinner she made her Aunt Polly give, and in remodeling Uncle Peter's ideas on the right way of furnishing a house. Her indulgent uncle, only indulgent to Helen of all people in the world, got the sort of furniture she wanted, and let her have as much company as she pleased. Intending to marry and "settle herself," she and the old gentleman determined to find out all they could about the marriageable men of the country, and contingently the marrying women. The village, five miles from them, was the nucleus to which their various investigations converged. At table daily the uncle and niece compared ascertained items, and determined who would, and who would *not do*. This young man tipped, that one was in debt, another had sisters, another was poor; so none of them, it was at length decided, would make a suitable husband for the good-looking, accomplished, richly dowered Miss Ashford. Yet, notwithstanding their unworthiness, Helen was far from satisfied, and not even an accurate knowledge of the cost of every bridal outfit in the neighborhood mollified her growing soreness regarding the fact that she was twenty-three and not married yet.

At last, however, Helen's turn came. An elegant-looking man, as Helen thought, "not more than thirty," stopped at the gate one evening and asked Helen, who was walking in the flower garden, if he might stay all night. She promptly informed him that he could, and asked him in. They had the parlor to themselves for two hours, Uncle Peter being late getting home from the village. The stranger, "Captain Grassmere," as he informed her, was from the "city" where she had attended school, and was a merchant. Miss Helen was very much charmed with him, and the acquaintance progressed swimmingly. She made her aunt get up the best supper she could for him, and her uncle was induced by her representations to think his visit quite a godsend. He left the next day, promising to return in a week. After his departure the young lady discovered a *sealed* letter on the floor. Following her *bent*, she unhesitatingly broke the seal, and read what purported to be a letter from Captain Grassmere to one of his partners, giving directions concerning the business while he was away "traveling for pleasure." Over

this letter Helen and her uncle put their heads together, and the result was, no pains were spared, no encouragement wanting, to induce the well-dressed Captain Grassmere to become a suitor for the heiress expectant.

He was not slow to follow his cue, and in an uncommonly short space, the courting and marriage were consummated.

It then came out that Captain Grassmere was a "bummer;" never had *seen* the city where Miss Ashford was "finished," and had nothing in the world but his *fine clothes*."

V. D. C.

HAPPINESS HEREAFTER.

SOME argue that when men reach heaven those endowed with a small quantity of intellect will be as happy as the most talented of men; others that there will be degrees of happiness proportionate to the endowment of Ideality, Sublimity, Spirituality, etc., to take in the beauty and grandeur of the scenery around. Some contend that when one is happy, no one can be more happy; on the same principle, when a thing is perfect nothing can be more perfect.

We suppose that a canary-bird enjoys his food just as exquisitely as the eagle does his, but they are different birds, each perfect in itself.

Pope says:

"The wise man is happy nature to explore,
The fool is happy because he knows no more."

We believe that a human being may be happy to a certain extent with uninstructed faculties; but let the faculties be enlarged, instructed and intensified in power, and he will enjoy life on a larger scale, and a thousand times more than the superficial or ignorant man. The rustic swain who looks up to the bright starry heavens, regards the sight as beautiful. It is not less beautiful to the astronomer; he sees the starry vault in its brilliancy, but he sees more; he thinks of them as suns, and as centers of systems like our own; he thinks of the immeasurable region of space, the tremendous circuits which these planets traverse in sweeping through space; and his intellectual outreach, his power of comprehension and enjoyment, are immeasurably above that of the man who looks at the stars as mere accompaniments of this little earth. The child is "pleased with the rattle, tickled with a straw," but its happiness is

small, its capacity for enjoyment is limited; and though cannons and trumpets may be the choice of manhood, the relations which these articles bear to life and times are far above the limited comprehension of a little child. One of the objects in educating and training people on earth is, not only that they may be useful and happy here, but soar

on a higher plane hereafter. If the pint cup be full, and if fullness be happiness, the weak man is as happy as he can be; but if grasping, comprehensive outreach constitutes a source of happiness, the greater the man, the broader his views, the higher his achievements, and the deeper his comprehensions, the happier he will be.

THE CONTRAST.

BY J. M. CAVANESS.

THEN.

The sun hangs low in the distant west,
A rainbow arches the darkening east;
The clouds are glowing with gorgeous dyes
Of jasper, amber, and amethyst.

A moment more, and the rainbow fades,
The sun is sunk in the golden west;
Thus fade my dreams of a love-crowned life,
And thus sinks hope in a sighing breast.

NOW.

The scene is changed: 'tis the early morn,
And yonder dawns the approaching day;
The thunder-clouds of a night of storm
Dissolve and scatter and pass away.

A moment more, and the sun bursts forth,
And earth and sky are in bright array
Thus hope dispels my night of gloom,
Thus dawns for me a golden day.

HOW THE DIFFERENT FACULTIES COMBINE—NO. 5.

AMONG rude nations two or three simple sounds, and the changes which can be wrought upon them, constitute their music. As the nations become more advanced in civilization, the musical sounds become more complex and the musical instruments more elaborate. The same is true with the various faculties of the mind. Rude and uncivilized nations, and young children in civilized nations, have few and very simple thoughts, and their words are alike simple. Nouns and verbs they understand, but the more complicated forms of thought and speech they do not comprehend. The results of culture are seen in the number and variety of faculties which can be brought into co-operation and co-ordination in the thoughts, words and acts which men perform.

We may imagine language to have once been exceeding simple. The savage who is hungry will say "food," or the equivalent, and perhaps add with a gesture, "me." As he advances further in the culture of mind and education, he will say "food give me." As he further advances he will say, "please give me food," and he might add, "I am hungry, please give me food, and you shall have my warmest thanks," and this idea of—give me food, may be extended to a respecta-

ble speech, and every added word will give some new shading to the idea, and make it more gracious and complete.

There is many a man who is well read in history, in science, in general information, who may be a good grammarian and perhaps can write his matured thoughts accurately and strongly, but who has not yet learned to think and talk well in conjunction. If he were called upon to speak before an audience he would be confused, embarrassed and unable to proceed with anything like connectedness and elegance. If he continue to practice for years he will ultimately come to a point at which he can clearly recall facts, and express himself with ease, and effect.

How has this been brought about? We answer by the co-ordination and combination of his faculties. The most natural way to combine language with the intellectual faculties, is to awaken, first, Individuality to the subject matter. This gives power to describe details, but Eventuality, which perceives facts and records historical events, must also adjust the knowledge which the person possesses.

If Individuality and Eventuality fail thus to call up and arrange for explanation the matter of the subject, there will be a painful dwelling upon points, waiting, as it were, for

something to be called up in the mind. Persons of this tendency have a drawling hesitancy which becomes very irksome to the listener; but one who is sharp to perceive and has a good memory, will recall his knowledge and adjust it for utterance as fast as his vocal organs can explain it—his speech is fluent and rapid.

Some however can give facts, rehearse history and the transaction of a case; as, for instance, any matter pertaining to a lawsuit; but are unable to bring their reasoning powers into the matter and speak with logical force and clearness. Such need the training of the reasoning faculties in conjunction with oral discourse, or the organs through which oral discourse is manifested. Many a man has wit, but it does not come to his service in season; he thinks of some apt illustration after he has resumed his seat, and wonders he did not think of it before. One better trained and cultured in all the graces of speech and accustomed to a coordinate action of his faculties will see the witty points and have a remark in readiness.

Approbateness combined with Language imparts to the subject a plausible manner and elegance which flatter and conciliate. A man who has large Approbateness, as a lawyer, will never fail to speak of the opposing counsel, as "my learned friend," nor will he forget to express himself with reverent respect to the courts. Large Language combined with Cautiousness enables a man to speak with a vividness that awakens fear and dread in the hearer. How beautiful also does Language combine with the social faculties. There are some who love devoutly, but are dumb as statues when they come to explain their regard; in fact, they can not speak to man in a kindly, friendly way, much less to woman; but one who has trained his intellectual faculties to work in unison with his social feelings will bring out that which will awaken a corresponding sentiment in the person addressed. His manners in society are easy and winning. Such a man has trained his social disposition to act in harmony with his intellect and with his refining sentiments. In fact, the more completely all the faculties are brought by practice to act in harmonious combination, the more full and rich, the more varied and excellent are the mental manifesta-

tions; like the rich music which may be elicited by the harmonies of a trained orchestra.

Pride, even in the language and manner of its possessor, seasons every emotion, clothes every utterance and is the inspiring feature of every statement. Such men are stiff, grand, dignified, lordly. Their very gracious terms are unacceptable, because so patronizing.

A family was poor, needed aid, had spent their last dollar, when a pompous official, a steward of the church of which the family were members, called and remarked, that if they were in want, he was the steward of the church and held the purse, and would grant them aid; but their pride was so excited by his pride that they professed not to want anything. An hour after, a good sister went in, learned their condition, rendered them aid, and saved them from distress. One needs something besides Self-Esteem, if he would minister to the afflicted in so gracious a way that sensitive natures can consent to accept a boon and benefaction.

"KNOW THYSELF."

THE *Oneida Circular* says: "Men may be divided into three classes with reference to their self-estimates. First, is the man who undervalues himself; who never soars above the common treadway, because he has no confidence in his powers. His introspective analysis is most despondent, and he is continually subjecting his talents to unfavorable comparison with those of others. He never gets the credit he deserves, for no one knows what is in him.

"Second, is the man who overrates himself. He is always ready with his, 'I know,' or 'I can do it.' He is swollen with conceit, and commits innumerable follies in consequence of his overweening vanity. He talks largely and inspires for a time an unfounded confidence.

"Third, is the man who seems to have an omniscient discernment of his own capabilities. He estimates himself justly. He places the utmost reliance upon his genius; but you see he has reason. If he has a talent, he knows it and puts it to use where it tells on men or things. The casual observer may think him conceited; but the near acquaintance perceives that his self-valuation is only at par.

"The first two, as situated in ordinary society, attain a correct perception of their individual capacity only, if ever, through much buffeting

and sore experience; while the third too often forgets the fountain of his wisdom. Our system of criticism is the grand regulator and corrector of all three. The diffident man is inspired with a just idea of his importance as a ductile medium, so that he attempts to do things which his natural timidity forbade him to contemplate. The conceited man is curbed; he lowers his head and takes a smaller place. The wise man is taught to render to God the things which are God's, and shines accordingly with added luster.

Thus every truth-lover may know himself as others know him, and none need waste long years in abortive aims from lack of true self-knowledge."

[Would not a little science—Phrenology—go well with your system of criticism? Show one *why* he undervalues himself—small Self-Esteem—and why the other overrates himself—large Self-Esteem—and how it is that another weighs himself in scales so evenly balanced, that it is without excess or deficiency.]

Physiognomy, or Signs of Character.

Of the soul, the body form doth take,
For soul is form, and doth the body make.—*Spenser.*

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONTINUED FROM OUR JUNE NUMBER.]

OF THE MUSCLES OF THE NOSTRILS.

THE nostrils are features which have a powerful effect in expression. The breath being drawn through them, and their structure formed for alternate expansion and contraction, in correspondence with the motions of

the chest, they are an index of the condition of respiration when affected by emotion. As they consist of cartilages moved by appropriate muscles, acting in strict sympathy with the drawing of the breath, they become expressive of animal excitement. We may enumerate four muscles which move the cartilages of the nostrils:

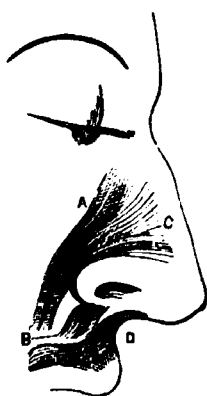


FIG. 1.—MUSCLES OF THE NOSTRILS.

Levator labii superioris et ala nasi (A) — This muscle arises from the upper jaw-bone and descends to the lip; but a part of it stops short to be attached to the movable cartilage of the nostril; it raises the nostril along with the upper lip.

The *Depressor ala nasi* (B) arises from the upper jaw-bone, close to the sockets of the front teeth; it ascends and is inserted into the lateral cartilage of the nostril, and pulls down that cartilage.

The *Compressor nasi* (C) arises from the cartilaginous bridge of the nose,* and is inserted into the lateral cartilage of the nostril. The name would imply that this muscle compresses the membranous part of the nose, which it does; but its principal action must be to expand the nostril by raising the lateral cartilage.

The next muscle is a slip of the *Orbicularis oris* (D), which, detaching itself from the mass of that muscle, runs up to the edge of the *septum* of the nose.

Thus we see how nature has provided for the motions of the nostrils. The actions of these muscles are controlled by a nerve of the class which has been distinguished as subservient to the apparatus of breathing; and it is owing to this that the sympathy is established between the general act of drawing the breath and the expansion of the nostrils. As the motions of the nostrils, however, are intimately connected with those of the lips, I shall defer making any further observations upon them until the muscles of the mouth have been described.

MUSCLES OF THE LIPS AND CHEEKS.

The fleshy structure of the lips is in a great measure owing to a circular muscle which surrounds the mouth. This muscle closes the lips, and is the opponent of many other

* That is certainly its most fixed extremity.

muscles, which, taking their origin from the prominent points of the bones of the face, are centered toward the mouth, and, besides opening it, move the lips in various directions. We must look upon the whole of these muscles in three points of view: 1, As

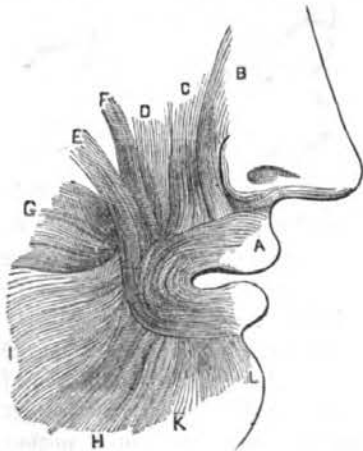


FIG. 2.—MUSCLES OF THE LIPS AND CHEEKS.

belonging to mastication, turning the morsel and placing it under the action of the teeth; 2, as part of the organ of speech; and 3, as powerful agents in expression.

Orbicularis oris (A).—The fibers of this circular muscle can be traced continuously round the lips, and have properly no origin. We have already taken notice of the *Levator labii superioris et alæ nasi* (B), some fibers of which are inserted into the upper lip.

The *Levator labii proprius* (C) arises from the upper jaw, near the orbit. It is attached exclusively to the upper lip, and raises it.

Levator anguli oris (D).—This muscle lies under the last, and is, of course, shorter; it raises the angle of the mouth.

The *Zygomaticus* (E) arises from the zygoma, a process of the cheek-bone which joins the temporal bone; it is inserted into the angle of the mouth.

There is sometimes an additional muscle, arising and inserted in a similar manner, called the *zygomaticus minor* (F).

The *Buccinator* (some of the fibers of which are represented by G) is a flat muscle which lines the inside of the cheek, and arising from the sockets of the back teeth of both jaw-bones is inserted into the angle of the mouth.

As the teeth of man indicate that he is

omnivorous, and intermediate between the two great tribes of animals—the carnivorous and herbivorous,—we expect the muscles also to exhibit the same middle state, and to partake of the characters of both these classes. And such is found to be the case. The three muscles last enumerated combine to raise and retract the angle of the mouth, and by doing so they expose the canine teeth. Now, this group of muscles is especially powerful in the carnivorous animal; they lift the fleshy lips off the long, tearing fangs of the lion or tiger, and produce a fierceness of expression; but in the milder graminivorous animals the same class of muscles have a different direction given to their action, and they are not capable of elevating the angles of the mouth in a similar manner. In ourselves, when these muscles draw upon the orbicularis and disclose the angular teeth, a painful and bitter expression is the effect. But before we can speak correctly on this subject we must pursue the description of the remaining muscles.

Of the muscles which depress the lips there is,

The *Triangularis oris*, or *depressor anguli oris* (H), a comparatively powerful muscle, which arises from the base of the lower jaw and is inserted into the angle of the mouth.

In the drawing some muscular fibers (I) may be seen, which join the triangularis oris and pass to the angle of the mouth. These are part of a superficial muscle of the neck, the *platysma-myoides*, the fibers of which mount over the jaw to terminate on the cheek. The uppermost fasciculus, represented in the drawing, has been described by Santorini as a distinct muscle, and from its action in laughter has obtained the name *Risorius Santorini*.

The *Quadratus menti* (K)—A small, square muscle situated on the chin, depresses the lower lip.

The *Levator menti* (L) is a small muscle which arises from the lower jaw, near the sockets of the front teeth, and passes to be inserted into the center of the integument of the chin. When both muscles act they throw up the chin and project the lower lip.

The angle of the mouth is full of expression; and much is implied, according to the

prevailing action of the superior or inferior class of muscles. The triangularis oris and the levator menti combine to produce a kind of expression which is peculiar to man. The angle of the mouth is drawn down by the former, while the lower lip is arched and elevated with a contemptuous effect, by the latter; whence the levator menti has sometimes been called *superbus*. The union of so many muscles at the angle of the lips produces that fullness about the mouth remarkable in those who are both thin and muscular. In the child or youth whose face is plump, they make the dimple in the cheek. It is perceived that the orbicularis is the opponent of all the muscles which are concentrated from various points to the lips; and it is by the successive action and relaxation of these antagonizing muscles that so much and so varied expression is given to the mouth. This circular muscle is affected in various



FIG. 3.



FIG. 4.

emotions; it tremblingly yields to the superior force of its counteracting muscles, both in joy and grief; it relaxes pleasantly in smiling; it is drawn more pleasantly by its opponent muscles in weeping.

We can have no better illustration of how much depends on the function exercised by the mouth, for the particular character impressed on the lower part of the face when the lips are in motion, than by watching the features of a preacher or advocate engaged in his vocation, and afterward, if opportunity offers, looking at the play of the same jaws and lips when over a trencher. The whole machinery from the temple downward, and from the angle of the jaw to the chin, is in operation during mastication; whereas, in the most impassioned discourse the action is concentrated to the lips.

In speaking there is much motion of the lower lip, and, consequently, activity in those muscles which form the fullness of the

chin; yet a remarkable variety is produced in the lines which mark the features about



FIG. 5.



FIG. 6.

the upper lip, by the play of the different muscles which converge to the mouth from margins of the orbits. But this subject has further interest.

The organization necessary to speech—the great instrument of human thought—is widely dispersed; that is, for the utterance of sound there must conform a motion of the lungs or chest, an adjustment of the larynx and pharynx, and a fine modulation of the lips. It is more directly from the motions of the tongue and lips that articulate sounds proceed; and the connection of the numerous muscles brought into operation in these actions is congenital with the awakening intellect. Long before a child is taught to speak, we may see an imperfect agitation of the lips and cheeks; and sounds are uttered which wait only for the effort of imitation to become language.

These remarks bear out our former statement, that beauty in the lips and lower part of the countenance of a well-formed face has relation to the perfection of the structure viewed in connection with speech, and in contrast with the apparatus for mastication. The possession of an instrument of speech is instinctively associated in our thoughts with the most exalted endowments of man, moral and intellectual.

OF THE BEARD.

"Vidi presso di me un veglio solo,
Degna di tanta riverenza in vista,
Che più non dee a padre alcun figliolo.
Lunga la barba e di pel bianca mista,
Portava a' suoi capegli simigliante
De qual cadeva al petto doppia lista."

Dante.

The stages of man's life are outwardly characterized. An opinion prevails that the form and lineaments of old age are a conse-

quence of the deterioration of the material of our frame; and that the resemblance so often drawn, between an aged man leaning on his staff, and a ruin tottering to its fall, is a perfect one. It is not so; the material of the frame is ever the same; years affect it not; but infancy, youth, maturity, and old age have their appropriate outward characters. Why should the forehead be bald and the beard luxuriant if not to mark the latest epoch of man's life? or what reason can be given for the hair not growing on the chin during the vascular fullness of youth, but that it would be inconsistent with the character of that time of life to be provided with a beard?

When these Essays were first written there was not a beard to be seen in England, unless joined with squalor and neglect; and I had the conviction that this appendage concealed the finest features. Being in Rome, however, during the procession of the Corpus Domini, I saw that the expression was not injured by the beard, but that it added to the dignity and character of years. It was evident that the fine heads by the old masters were copies of what were then seen in nature, though now but rarely. There were beards which nearly equaled that of the "Moses" of Michael Angelo in length, and which flowed like those in the paintings of Domenichino and Correggio.*

The beard is characteristic of nations. In the East it is honored, and to be shaved is the mark of a slave.† A beard of three hands' breadth is a goodly show; but to exceed that requires a life of repose: violent

exercise in the field shortens the beard. The Turks have a very poor beard. The Persians have noble beards, and are proud of the distinction. The beard of Futteh Ali Shah, the



FIG. 7.—A FINE BEARD.—LORD MONCK.

late King of Persia, reached below his girdle, was full and fine, and remarkable in a nation of beards for having no division in the middle. Such a beard during the active period of life shows finely on horseback, being tossed over the shoulders in the wind, and indicating speed. In the natural beard the hair has a peculiarity depending on the place from which it grows. The hair of the upper lip is usually more profuse, and, even in the oldest man, is of a darker hue than that of the under lip; so that falling on the lower part, it can still be distinguished as it mixes with the purer white. Again, the hair descending from the sides of the face attains a greater length than that which comes from the chin; and this is more especially the character of age.

In the French regiments they set frightful fellows, with axes over their shoulders, to march in front; on their heads is a black bear-skin cap, of the form and dimensions of a drum; and they select men with beards of the same hue, which grow in a bush, the counterpart of that on their heads. But the face as seen between the two black masses is more ludicrous than terrible, and has an

* "In the procession of the Corpus Domini, the Pope is usually attended by bishops from all parts of Christendom—from Mount Lebanon and the East, as well as from Roman Catholic Ireland. These dignitaries, with the cardinals, the superiors of convents, the friars of various orders, and the cavalcade of the guarda nobile, form a pageant far beyond what royalty can attain, or can anywhere else be witnessed; whether we consider the place and accompaniments, or the actors and their costumes. Then it was that age, with bald head and flowing beard and appropriate robes, surpassed youth and beauty, with all the trappings of the cavalier."—*Note from Journal.*

† 2 Samuel, x. 4.

effect very different from what is intended. A common fellow's beard, like a common fellow's countenance, is coarse.

Even in the Franciscan and Capuchin monks, the beard has not always the fine character displayed in the works of the old painters. Their models are gone with their times. Something excessive and ideal may be represented by the beard. Michael Angelo has, perhaps, followed Scripture in the beard of his "Moses," which floats below the girdle; and in the fresco of Jeremiah, in the Sistine Chapel. The finest painting of the beard that I have seen is by Correggio, in the Scala of the Albergo dei Poveri, in Genoa—a fresco of the Saviour in the arms of the Almighty—where the beard of the Father flows beautifully. In short, the beard may become, with knowledge and taste, the most characteristic part in a figure.*

Expression in the Lips and Mustaches—Things familiar do not always give rise to their natural association. I was led to attend more particularly to the mustache as a feature of expression, in meeting a handsome young French soldier coming up a long ascent in the Côté d'Or, and breathing hard, although with a good-humored, innocent expression. His sharp-pointed, black mustache rose and fell with a catamount look that set me to think on the cause.

Every one must have observed how the nostrils play in hard breathing.† We have seen that there is a muscle which is the principal agent in this action; and it may

* "Our northern artists are unfavorably situated, not owing to the direct influence of cold, as Winckelman imagined, but an indirect cause. In historical painting, they draw from copies of nature, and paint beards, as they do the naked figure, without seeing it, or being familiar with the form and color of the one or the other. But in Rome, also, they make mistakes. I found the artists supporting a fellow whose beard was their model. The hair of the head and the beard of this man had grown to an extraordinary length, showing what an uncouth mass it may become. He had been painted so often as the Father of the gods, that in his craze he had believed himself to be no less. I said, if they would plunge him in the Tiber, and study him as he rose, he might pass for a river god. No; the beard is a mere mass of hair, but admits of much character."—*Note from Journal*.

† Physiognomists make a wide nostril the sign of a fiery disposition. It may be expressive of passion without being the cause. The idea of its being the seat of passion is undoubtedly taken from animal expression. "There went a smoke out of his nostrils" is hardly descriptive of human excitement.

be felt swelling during inspiration, when the finger is pressed on the upper lip, just under the nostril. It is the *depressor alæ nasi*. The action of this muscle under the roots of the hairs on the lip sensibly moves them; and as all passionate excitements influence the respiratory actions, the nostrils and mustache necessarily participate in the movement in violent passions. Thus, although the hair of the upper lip does conceal the finer modulations of the mouth, as in woman, it adds to the character of the stronger and harsher emotions.

I continued to think of this in descending the Rhone in company with some French officers; they were merry with wine, and I saw their mustaches, black, red and white,



FIG. 8.—A STRONG MUSTACHE!—VICTOR EMANUEL.

animated in their songs and laughter; and although with a *farouche* character, these appendages rather added to than concealed expression. We see the pictorial effect in the hilarity of the Dutch boor.

The lower lip moves more than the upper. With this, too, we are so familiar as not to be sensible of it; but if we try the experiment of looking on the face of a friend in a reversed position, we shall be convinced that it is so. The expression of speaking results very much from the modulation of the lower lip; and the rising and falling of the jaw which takes place at the same time, and more especially in singing, adds to the motion.

Passion, however, is expressed more in the upper lip.

In compassionating a fellow-creature it is not natural to look on the face reversed. Yet I have seen in a modern picture a soldier regarding his wounded comrade, *dessus dessous*, the mouth to the forehead, the eye to the mouth. The immediate effect was a want of sympathy,—of proper feeling. Even the nurse turns her head in correspondence with the face of the infant. Is the same not meant by the Psalmist: "*My heart said unto thee, Let my face seek thy face?*" This was in my mind in looking on a picture of the Saviour, dead, lying on the knees of the Madonna. She turns her head, bringing her face nearly parallel with that of the Redeemer, which produces infinite grace and tenderness.*

The drawing of the head of a man thrown to the ground, being to our eye reversed, has not the same effect as when represented upright. Certain features must be exaggerated. That is, if the painter were to draw the face accurately, and then turn the picture the contrary way—the head downward—it would have no force. This arises from the reversed features being deficient in the accustomed harmony, and from the altered relation of the upper and lower lips. Michael Angelo, with his other excellencies, was a master of expression. There is a *Pieta* by him in *alto-relievo*,† which gives proof of this. The piece of marble does not exceed three feet, and nothing but expression could have given to it its celebrity.

I was never more sensible of the action of the lower lip as expressive of speech, than in looking on a picture by that very extraordinary painter, Zurbaran. It represents St. Francis. He is kneeling, his hands locked together energetically, his eyes raised, and his lower lip has the expression of moving in prayer.‡

* In the Gallery of the Academia delle Belle Arts, Bologna.

† In the Albergo del Poveri, in Genoa. "A *Pieta* is the representation of Christ resting on the lap of the mother. The eyes of the mother are shut, the mouth not open, but in the lips a form that implies she is about to kiss the cheek. The angles of the mouth are in the slightest degree depressed, and the lips must open when next she draws breath."—*Note from Journal.*

‡ The picture is in the Spanish School of the Musée Royale of the Louvre.

Among the many advantages which the artist has in the southern countries of Europe, the service of the Roman Catholic Church affords him the chief. At all seasons, as well as during the service of the altar, there are in the cathedrals and churches groups and single figures; the lady in rich attire, not more picturesque than the country girl; the beggar and the monk, on their knees, muttering their prayers. In the family pew of the Reformed Church there may be as holy a frame of mind, but never the expression of those rapt and solitary figures whom we see prostrate on the bare stones in the solemn light of these churches. But my object was to advert to their inaudible mutterings, in which the amount of expression capable of being thrown into the lips during speech may be well observed. Nor can a stranger go from the church to the picture-galleries and mistake for a moment where the great painters found their studies—where they gained those conceptions of devotion, of enthusiasm, and abandonment which we see in the portraits of their saints and martyrs.*

ESSAY V.

OF THE EXPRESSION OF PASSION, AS ILLUSTRATED BY A COMPARISON OF THE MUSCLES OF THE FACE IN MAN AND IN ANIMALS; AND OF THE MUSCLES PECULIAR TO MAN, AND THEIR EFFECTS IN BESTOWING HUMAN EXPRESSION.

THE violent passions are exhibited so distinctly in the countenance of both man and animals, that we are led to consider the movements by which they are made obvious, as characteristic signs provided by nature for the express purpose of intimating the inward emotions, that they may be interpreted by a peculiar and intuitive faculty in the observer.

This view, however, so natural at first, is not altogether satisfactory, and an opposite theory has been proposed in which such special provision is denied, and the appear-

* "St. Siro, Genoa. It is a new thing to see those beggars crawling on the stairs. There is one who, lying on his belly, drags himself along with a short stick; the precise figure that is in the cartoons of Raphael. They are squalid, distorted, and strange. One fellow among them I should have in my sketch-book. He is on his knees, and, while receiving a soldo from a very poor and very old woman, counts his beads and crosses him-

ances are accounted for as the effect of certain actions which are performed in obedience to the common laws of the animal economy. It is also said that we are taught by experience alone to distinguish the signs of the passions in man; that in infancy we

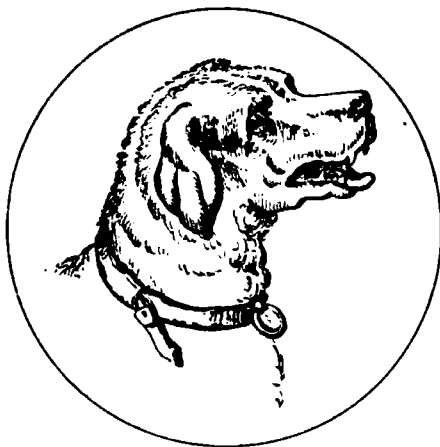


FIG. 9.—HEAD OF A DOG.

learn that smiles are expressive of kindness, because accompanied by endearments, and that frowns are the reverse, because they are followed by blows. The expression of anger in a brute is alleged to be merely the cast of features which precedes his biting; and the character of fondness, that which is seen in his fawning and licking of the hand. In short, it has been maintained that what are called the external signs of passion are only the concomitants of those voluntary movements which the structure renders necessary. That, for example, the glare of the lion's eye proceeds from his effort to see his prey more clearly; and his grin or snarl from the natural act of unsheathing his fangs before using them.

But, if we attend to the evidence of anatomical investigation, we shall perceive a re-

self with an indifference that hardly can be real. In entering a church in health and the enjoyment of life, to step through among the 'poor!' is no bad preparation. It is impossible to witness the countryman, whose coarse dress marks the lowness of his condition, to see him apart in an obscure isle, cast down and in prayer, with such perfect abstraction and abandonment, without the words of the publican being suggested, 'God be merciful to me a sinner.' In this respect, amid all the blazon and show of worship which belong to the Roman Catholic, it seems still the Church of the poor. There is no respect for rank or condition within the precincts of a place of worship."—*Note from Journal.*

markable difference between the provision for giving motion to the features in animals and that for bestowing expression in man. In the lower creatures there is no expression but what may be referred, more or less plainly, to their acts of volition or necessary instincts; while in man there seems to be a special apparatus for the purpose of enabling him to communicate with his fellow-creatures by that natural language which is read in the changes of his countenance. There exist in his face, not only all those parts which by their action produce expression in the several classes of quadrupeds, but there is added a peculiar set of muscles, to which no other office can be assigned than to serve for expression.

OF EXPRESSION IN ANIMALS.

In brutes the most marked expression is that of rage, the object of which is opposition, resistance, and defense. But on examination it will be found that the force of expression is in proportion to the strength of the principal action in the creature when thus excited.

The graminivorous animals, which seek their subsistence, not by preying upon others, nor by the ferocity, contest, and victory which supply the carnivorous with food, have in their features no strong expression of rage; it is chiefly confined to the effect produced



FIG. 10.—A HUNGRY WOLF.

on the general system. Thus the inflamed eye and the breathing nostril of the bull are induced by the excitement of the whole frame; his only proper expression of rage is in the position of the head, with the horns

turned obliquely to the ground, ready to strike. And, indeed, it may be observed, that animals which strike with the horns show little indication either of fear or rage, except in the position of the head; for the breath ejected from the expanded nostril is the effect of mere exertion, and may belong to different conditions of the frame. In all graminivorous animals the skin of the head is closely attached to the skull, and capable of very limited motion; the eye is almost uniformly mild, and the lips are unmoved by passion.

It is in the carnivorous animals, with whose habits and manner of life ferocity is instinctively connected, as suited to their mode of subsistence, that rage is distinguished by remarkable strength of expression. The eyeball is terrible, and the retraction of the flesh of the lips indicates the most savage fury. The action of the respiratory organs, the heaving and agony of breathing, the deep and harsh motion of the air drawn through the throat in the growl, declare the universal excitement of the animal. It is wrong to imagine that all this is a mere preparatory exposure of the canine teeth. Brutes may have expression, properly so called, as well as man, though in a more limited degree; but in them expression is so molded to their natures and their necessities, that it seems accessory to their needful and voluntary actions.

The horse is universally held to be a noble animal, as he possesses the expression of courage without the ferociousness of the beast of prey, and as there is a consent between the motions of the ear and the eye, which resembles the exertion of mind and the movements of the human countenance. But even this expression is the result of an incidental consent of animal motions, and no more proves intelligence than the diminutive eye and the unexpressive face of the elephant denote the contrary. We admire it, because there is as much animation as in the tiger, without the ferocity. The consent of motions between the eye and the ear of the horse is a physical consequence of the necessities of the animal. His defense lies in the hind feet, and there is an arrangement both in the muscles and in the form of the skull for that retroverted direction of the eye

which seems so expressive in the horse, but which merely serves to guide the blow. The inflation of the nostrils, and the fleshiness of the lips belong to the peculiar provision for his respiration and mode of feeding.

[TO BE CONTINUED.]

A TRUE MINISTRY.

AT the installation of the Rev. Wm. M. Taylor, late of Liverpool, England, as pastor of the Broadway Tabernacle, Rev. Henry Ward Beecher preached a sermon upon "A True Ministry and the Signs which should follow it," in which he introduces this advice:

The great power of the truth of Christianity in the early ages was not found in the miracles which accompanied it, but in the pure, spiritual, and exalted lives which its preaching developed. A true Christian minister will begin by recognizing that all men need the saving influence of the Gospel of Jesus Christ. Some men believe that we have lapsed from a state of purity; others that we started from the other direction and are working up—some not quite so fast as they should—from the monkey tribe or below it. But whatever may have been the historic facts in regard to man, whether he is the degraded remnant of a nobler stock or has attained to his present eminence from a lower tribe of animals, the working fact which we have in hand to-day is this, that men are, individually and collectively, in such a condition that they need moral culture and development, and to such an extent as this is effected it may be justly called regeneration or new birth. There are none so good that they do not need spiritual re-birth, and none so bad that they are not susceptible of it. The true minister goes to men, not with doleful declarations that they must do right; that is not our message; but that they may do right. God administers all things upon the basis of love and beneficence. A true preaching of the Gospel will develop men on every side. The spiritual, intellectual, moral, æsthetic—everything that belongs to man belongs to religion, and it is its business to wake up everything there is in him, and give it appropriate expression. It will deliver the soul from the gloom of superstition, and inspire it with hope, courage, and joy.

[The purpose of religion is to perfect man; that is, to render his development entirely symmetrical.]



PRESIDENTS OF THE UNITED STATES, WITH PORTRAITS.

GEORGE WASHINGTON, the revered Father of his Country, is respected scarcely less in other countries than in the land that gave him birth. His Phenology indicated strong common sense, clear, practical reasoning power, integrity, reverence, firmness, and Self-Esteem. He was a model of order and prudence, self-poise and dignity.

He was born in Virginia, February 22, 1732, and at nineteen he was one of the adjutant-generals of Virginia. After General Braddock's defeat, Washington succeeded to the command; and in 1754 he commanded the military forces of Virginia, and led the expedition against Fort Duquesne (now Pittsburg). In 1759 he married Mrs. Martha Custis. In 1774 he was a member of the Continental Congress. In 1775 commander-in-chief of the American army. In 1787 he was a delegate to the national convention, and was chosen its presiding officer. Through his influence the Constitution of the United States was adopted. In 1779 he was unanimously elected President of the United States, and re-elected in 1793. In 1799 he issued his Farewell Address. He died at Mount Vernon, Dec. 14, 1799, aged sixty-eight.

JOHN ADAMS was of medium height, broad, muscular, and strong. His head was broad, his emotions earnest and deep; he was fiery and forcible. He was a man of talent among the mighty men of 1776.

He was born in Braintree, Massachusetts, October 30, 1735. Graduated at Harvard College, studied law, and took a prominent rank at the Boston bar. In 1764 he married Miss Abigail Smith. In 1773 he was elected to the Continental Congress. In 1777 he was appointed Minister to France, and in 1783 aided in negotiating the treaty of peace with England. In 1789 was elected Vice-President, and re-elected in 1793. In 1797 Mr. Adams was elected President, and retired, in 1801, from public life. In 1825 he saw his son elevated to the same high office he himself had filled; and on the 4th of July, 1826, it being the fiftieth anniversary of the Declaration of Independence, died, aged ninety-one.

THOMAS JEFFERSON was six feet two inches in height, thin, muscular, and active; had red hair, blue eyes, and a sensitive nature. His head was large and well-balanced, and his character harmonious. Though he was a man of ardent feeling, he was never known to be in a passion. As a friend, he was unchangeable, as a father tender, as a husband devoted, and as a patriot immovable. His mind was calm, clear, critical, comprehensive and orderly.

Thomas Jefferson was born in Virginia, April 13, 1743, and resided at Monticello, where he died. He entered William and Mary College in 1760, and adopted the law for his profession. From 1769 to 1775 he was a member of the Legislature of Virginia, and made an effort to procure the abolition of slavery. In 1775 he was sent to Congress, and drafted the Declaration of Independence. In 1779 he was elected Governor of Virginia. In 1784 he was appointed minister to negotiate treaties of commerce with foreign nations, and soon after was appointed to the French Court, to succeed Dr. Franklin, and remained until 1789, when he was appointed by Washington Secretary of State. In 1796 he became Vice-President. In this capacity, as President of the Senate, he wrote the celebrated "Manual of Congressional Routine." In 1800 he was elected President of the United States, and re-elected in 1804, and retired from office in 1809. He established the University of Virginia in 1818. He died July 4, 1826, aged eighty-three.

JAMES MADISON had a predominance of the mental temperament. His organization was harmonious, his brain large, compact, and very prominent in the intellectual region. He had originality, discrimination, and eminent talent. He was very cautious, discreet, lacked boldness of character, and was almost timid.

He was born in Orange county, Virginia, March 16, 1751. Graduated at Princeton, New Jersey, in 1771, and adopted the law as his profession. He was elected to the General Assembly of Virginia in 1776, and to the Continental Congress in 1779, and continued in that post until 1784. He took an active part in the national convention in Philadelphia in 1787, in which the Constitution of the United States was adopted, of which he was called the "father." He was soon after elected to Congress. In 1801 he was appointed Secretary of State by Mr. Jefferson, and succeeded him as President in 1809. He died June 28, 1836, aged eighty-five.

JAMES MONROE was known more for practical talent and common sense than for brilliancy, depth, and comprehension. He was well poised in his judgments, but not adapted to invent new resources. He was firm, conscientious, and persevering. He had moderate Acquisitiveness, and by his generosity became embarrassed in his circumstances. His sociability, honest frankness, and transparent integrity won for him universal regard.

He was born in Virginia, April 2, 1759. He left William and Mary College, to join the Revolutionary army under Washington. He distinguished himself in the battles of White Plains, Harlem Heights, Trenton, Brandywine, Germantown, and Monmouth. In 1782 he was elected to the Virginia Legislature, and in 1783 to Congress. In 1790 he was appointed to the United States Senate. In 1794 he was appointed Minister to France. In 1799 he was chosen Governor of Virginia. In 1803 he was again appointed Minister to France, and soon after as Minister to England. He was Secretary of State, under Mr. Madison, eight years. In 1816 Mr. Monroe was elected to the Presidency. In 1820 he was unanimously re-elected. In 1830 he moved to New York, to reside, where he remained until his death, July 4, 1831, at the age of seventy-two.

JOHN QUINCY ADAMS had a solid, enduring organization, united with sharpness and activity, great mental and physical industry, power, and endurance. He was firm, combative, courageous, argumentative, upright, thorough, and orderly. He had a remarkable memory, was scholarly and well-informed.

He was born in Braintree (now Quincy), Massachusetts, July 11, 1767. In 1781 Mr. Francis Dana, Minister to Russia, selected him for his private secretary. He returned to the United States in 1785, to finish his education, and graduated from Harvard College in 1787. He studied law, and commenced practice in Boston. By his literary ability, his knowledge of political affairs, and his able essays, he attracted the attention of the nation. Washington appointed him, in 1796, Minister to the Netherlands. He was afterward appointed Minister to Prussia. In 1803 he was chosen U. S. senator, and was appointed professor of rhetoric and oratory in Harvard College. In 1809 he was appointed Minister to Russia, and in 1814 aided in negotiating the treaty of peace with Great Britain at Ghent. In 1815 he was appointed Minister to Great Britain. In 1817 President Monroe appointed him Secretary of State. In 1824 he was chosen President of the United States, and, after serving four

years, was elected, in 1830, to the House of Representatives, to which office he was regularly re-elected until 1843, when he died—February 23d—aged eighty-one.

ANDREW JACKSON had a high head, especially at the crown, which indicates a towering ambition and a disposition to bear rule. His Firmness, Self-Esteem, Combativeness, Approbativeness, Adhesiveness, Benevolence, and Hope were all large, and he possessed the utmost indomitability of purpose and force of character, and had great influence with, and power over others.

Andrew Jackson was born at Waxhaw, South Carolina, March 16, 1767. In 1780, being but thirteen years of age, he joined a corps of volunteers in the army of the Revolution. In 1786 he received a license to practice law. In 1788 he went to the wilderness of Tennessee as United States solicitor. By his gallantry in repelling their attacks, he made himself greatly feared by the Indians, who gave him the name of "Sharp Knife" and "Pointed Arrow." In 1791 he located at Nashville. In 1796 he was elected the first representative of Tennessee to Congress, and in 1797 to the United States Senate, and, a year after, was appointed judge of the supreme court of the State, which office he held until 1804. In 1812 he entered the army in the war with Great Britain. In 1814 he was appointed major-general of the United States army. He fought the battle of New Orleans January, 8th, 1815. In 1821 he was appointed Governor of Florida. In 1823 he was sent to the United States Senate, and in 1829 was inaugurated President, and re-elected in 1832. He died at his home, near Nashville, on the 8th of June, 1845, aged seventy-eight.

MARTIN VAN BUREN had a predominance of the mental and vital temperaments. He was harmoniously balanced and self-poised. He was secretive and cautious, shrewd, clear-headed, and reticent, and one of the most accomplished politicians of his day. In manners he was polished and easy, in personal character unblemished.

He was born at Kinderhook, New York, December 5, 1782, and early commenced the study of the law. He was well acquainted with Aaron Burr, and from him he imbibed those peculiar principles of political tactics which he afterward put so successfully in practice. In 1803 he was admitted to the bar. In 1808 he was appointed surrogate of Columbia County. In 1815 he was appointed attorney-general of the State. In 1812 he was elected to the State Senate. In 1821 he was elected to the United States Senate, and re-elected in 1827. In 1828 he was elected Governor of New York. In 1829 he was appointed by President Jackson Secretary of State. In 1831 he was appointed Minister to England. In 1832 he was elected Vice-President. In 1835 he was elected President of the United States. He died at his family seat at Kinderhook, July 24, 1862.

WILLIAM H. HARRISON had a practical intellect, strong moral sentiments, and a fair degree of force. He was affectionate, kind and upright, prudent and circumspect.

He was born February 9, 1773, at Berkeley, Virginia; graduated from Hampden Sidney College, and commenced the study of medicine. The Indian outrages in the West roused his spirit, and joining a regiment of artillery, at Fort Washington, Ohio, in 1791, he soon reached the rank of colonel. In 1799 he was appointed Governor of the territory embracing everything north and west of Ohio, and in 1799 was elected its first delegate to Congress. The new Territory of Indiana being

constituted, Harrison was appointed Governor, and held the office thirteen years. In 1811 he marched against Tecumseh, and fought the famous battle of Tippecanoe. The war with Great Britain soon breaking out, Harrison took the field against the British and the Indians. On the 27th of August, 1813, the great battle of the Thames was fought, in which Tecumseh was killed. In 1816 he was elected to Congress from Ohio, and in 1824 to the United States Senate, and in 1828 was appointed Minister to the Republic of Colombia. March 4, 1841, he was inaugurated as President of the United States, and on the 4th of April, 1841, he died, deeply lamented.

JOHN TYLER had large perceptive organs, acquired information rapidly, retained his knowledge, and was able to bring it into use whenever required. He was brilliant and offhand, rather than deep or profound. He was firm, almost obstinate, yet in his general intercourse he was frank, plain, unaffected, and easily approached.

He was born in Virginia, March 29, 1790. At the age of twelve entered William and Mary College. At seventeen he graduated with distinction, and devoted himself to the study of the law. At nineteen he was admitted to the bar, and his practice became large and remunerative. At twenty-one he was elected a member of the Legislature, and soon became conspicuous as a popular debater. In 1816 he was elected to Congress. In 1825 he was elected Governor of Virginia, and re-elected, and afterward elected to the United States Senate. In 1841 he was installed Vice-President, and, on the death of Harrison, (April 4, 1841,) he succeeded to the Presidency. He died, January 17, 1862.

JAMES K. POLK had the motive-mental temperament, but a weak vital system. He was a man of dignity and determination; proud, firm, rather combative, but a man of intellect. He was not easily swayed from his purpose by either praise or blame. In his social nature and moral character he was high-toned.

He was born in Virginia in 1795; a year after the family moved to Tennessee. He graduated in 1818 from the University of North Carolina. He was admitted to the bar of Tennessee in 1820. In 1823 he was elected to the Tennessee Legislature. In 1835 he was elected to Congress. In 1835 he was elected Speaker of the House. During the stormy administrations of Jackson and Van Buren he exhibited much strength of character and force of mind, which gave him the title of "Young Hickory." In 1839, Mr. Polk was elected Governor of Tennessee. In 1844 he was elected to the Presidency, serving one term. He died at his home, in Nashville, Tennessee, on the 15th of June, 1849, aged fifty-four.

ZACHARY TAYLOR had a powerful constitution, was stout, large, and muscular. His was the vital motive temperament, giving coarseness and strength of texture, and adapted him rather to vigorous service in the open air than to a mental and sedentary pursuit. The base of his brain was large, giving animal force, warmth of temper, courage, and executive force. He was firm, hopeful, intelligent, honest, independent in feeling, and positive in character.

He was born in Virginia, November 24, 1784. A year after his birth his father moved to Kentucky. He was, from childhood, inured to hard fare and rough accommodations. In 1808 he was appointed lieutenant in the United States army, and in 1812 was placed in command of Fort Harrison on the Wabash, and, for his gallant service against the Indians, he was advanced to the rank of colonel. In 1814 he commanded an expedition

against the British and Indians. In 1833 he was engaged in the Black Hawk war. In 1836 he was ordered to Florida, to serve against the Seminoles, and was brevetted to the rank of brigadier-general. In 1847 he was engaged in the Mexican war, and won brilliant victories. March 4, 1849, he was inaugurated President of the United States, and died on the 9th of July, 1850.

MILLARD FILLMORE has a stocky, substantial body, a healthy vital temperament; enough of motive to give endurance; the two combining give power. He is more courteous than commanding, rather ambitious than dignified. He is a man to win rather than to command; to act as modifier and pacificator rather than as a leader or ruler.

He was born at Summer Hill, New York, January 7th, 1800. When fifteen years old he was set to learn the trade of a clothier. At nineteen he commenced the study of law. In 1823 he was admitted to the bar. In 1839 he was elected to the New York Legislature. In 1833 he was elected to Congress. In 1849 he was elected Vice-President. On the 9th of July, 1850, by the death of General Taylor, Mr. Fillmore succeeded to the office of President. Since his retirement, in 1853, he has resided in Buffalo, New York.

FRANKLIN PIERCE was born at Hillsborough, New Hampshire, November 3d, 1804. He was graduated from Bowdoin College, in 1824, and chose the law for his profession. In 1833 he was elected to Congress. In 1837 he was elected to the Senate. In 1847, during the Mexican war, he enrolled himself as a private in a New Hampshire company, but was soon appointed colonel, and soon after brigadier-general of the army under Scott. In 1853 he was inaugurated as President of the United States. At the close of his term he retired to his home in Concord, New Hampshire. He died October 8th, 1869. Mr. Pierce was of medium height, handsomely built, rather harmonious in his mental organization; was a man of good talent, social and mellow and friendly, and much beloved.

JAMES BUCHANAN was born in Pennsylvania, April 22d, 1791. He was graduated at Dickinson College in 1809, studied law, and was admitted to the bar in 1812, and rapidly rose in reputation, and was able, at the age of forty, to retire from the profession. He was elected to the Legislature of Pennsylvania in 1814. In 1820 he entered Congress, and became an able debater. In 1831 he was appointed Minister to Russia. In 1833 he was elected to the United States Senate. In 1845 he became Secretary of State. In 1853 he was appointed Minister to England. On the 4th of March, 1857, he was inaugurated as President. During his administration the rebellion broke out. He deemed that he had no right, to suppress rebellion by coercive measures. If such a man as General Jackson had been in the chair, the war would probably have been nipped in its bud. In March, 1861, Mr. Buchanan retired to his home, near Lancaster, Pennsylvania, where he died, June 1st, 1868.

ABRAHAM LINCOLN was tall and spare; had a large brain, amply developed in the upper part. His strong perceptive faculties gave him a ready judgment, quick knowledge of facts, and the power to bring into use all his knowledge at a moment's notice. Sharp, practical judgment, an intuitive mind, and keen intelligence as to men and measures, were his chief intellectual traits. His great firmness and conscientiousness gave him perseverance, steadfastness, and integrity. His cautiousness made him conservative, prudent, and guarded. His Benevolence rendered him generous and liberal.

Abraham Lincoln was born February 12th, 1806, in Hardin Co., Kentucky. He was seven years of age before he went to school, but by patience and perseverance he became passable as a scholar, and an excellent mathematician. He was brought up in the rudest work of frontier life, clearing away the forest and running a flat-boat on the Mississippi River. In 1832 he volunteered in the Black Hawk war; was elected captain, and served with honor. He afterward began the study of law by borrowing books and reading them by firelight. His neighbors looked to him for counsel in exigencies. He was for a time a surveyor. In 1834 he was elected to the Illinois Legislature. In 1836 he was admitted to the bar and rose rapidly. He was elected to Congress in 1846. He was a popular debater, and was a competitor of Stephen A. Douglas for United States Senator, and in 1850 won a national reputation by his great struggle with the "little giant" before the people. In 1860 he was elected to the Presidency. Secession commenced before he took his seat. He had a world of care, taxing his judgment to the utmost, and he won the reputation throughout the world as a man of integrity, humanity, and wisdom. In 1864 he was re-elected, and on the 18th of April, 1865, after the war had closed, he was basely assassinated by a dissipated or insane partisan of the rebellion.

ANDREW JOHNSON has an excellent constitution. The brain is large and heavy in the base, giving strong passions and great energy. He is proud, ambitious to be known, sensitive to praise and reproach, and strongly inclined to vindicate himself.

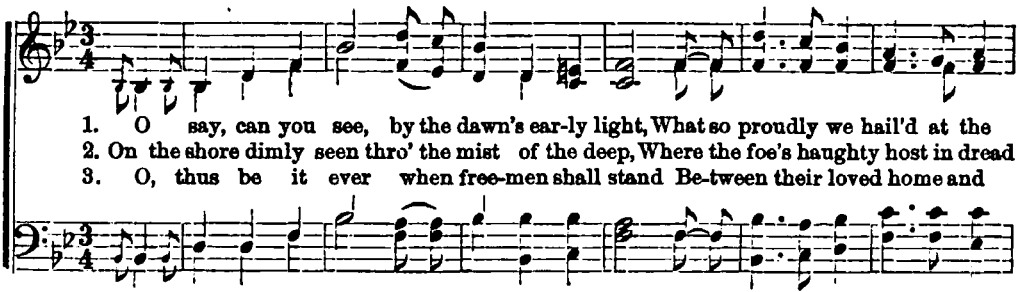
He was born in North Carolina, December 29th, 1808. He was early left fatherless and in poverty; at the age of ten was apprenticed to a tailor, and learned to read after he went to his trade. He set up his business in Greenville, Tennessee, where he now resides, entering the place on foot, with his bundle slung on a stick over his shoulder. He married a lady of good education, who instructed him in writing and in arithmetic. He read extensively and became well-informed. He was elected an alderman of his village in 1829, and mayor the next year. In 1835 he was sent to the State Legislature, and in 1841 to the State Senate, and in 1843 to Congress. In 1851 he was chosen Governor of Tennessee, and re-elected in 1855. In 1857 he was elected to the United States Senate. In 1862 he was appointed Military Governor of Tennessee. In 1864 he was elected Vice-President. After Mr. Lincoln was assassinated, Mr. Johnson succeeded to the Presidency. At the close of his term, in 1868, he returned to his home in Tennessee.

U. S. GRANT, is well built, of average stature, a snug and strong frame, and a good degree of activity, but more endurance and perseverance. He is calm, self-poised and prudent, and persistent in a high degree. He has secretiveness enough to keep his own counsel, and courage enough to push his purposes manfully. He is hopeful, genial, and kindly; is a man of few words, but earnest and efficient when in the line of duty. He is a soldier rather than a politician or a statesman.

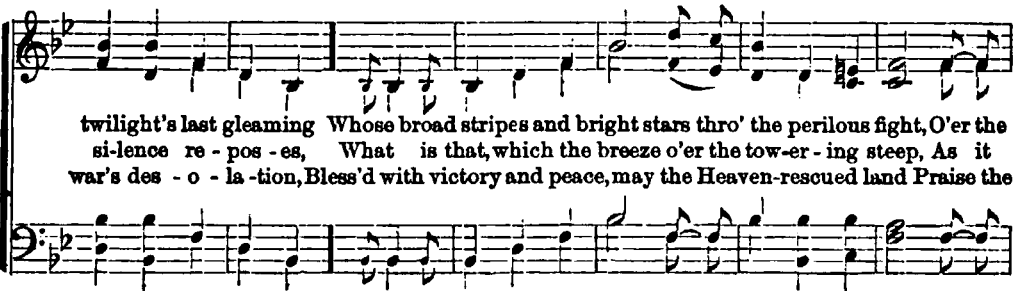
He was born at Point Pleasant, Ohio, April 27th, 1822. At seventeen he entered West Point. He became conspicuous for his courage and manliness, not for brilliancy. Having served in the army under General Scott, he resigned his commission in 1854 and engaged in business. When the late war began he raised a company and was mustered into service in June, 1861, and was appointed colonel of the 22d Illinois volunteers. In March, 1864, he obtained the highest position in the army. He summed up his victories with the surrender of General Lee, April 9th, 1865, thus virtually closing the war. In 1868 he was elected President of the United States.

STAR-SPANGLED BANNER.

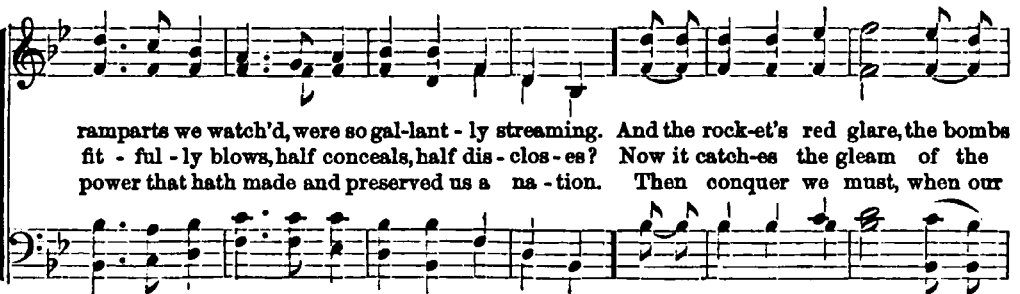
Words by Dr. FRANCIS KEY.



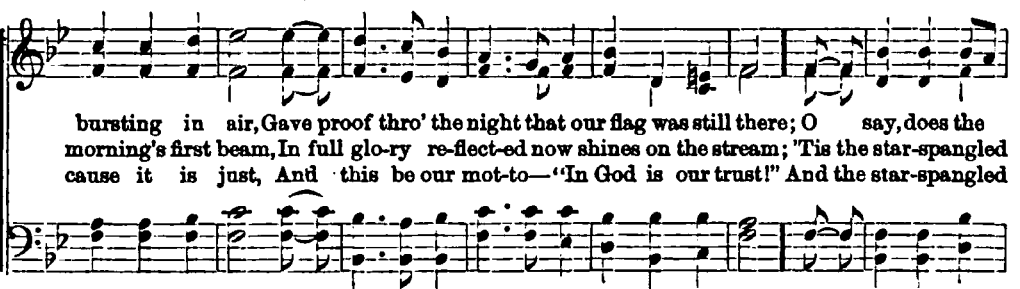
1. O say, can you see, by the dawn's early light, What so proudly we hail'd at the
2. On the shore dimly seen thro' the mist of the deep, Where the foe's haughty host in dread
3. O, thus be it ever when free-men shall stand Be-tween their loved home and



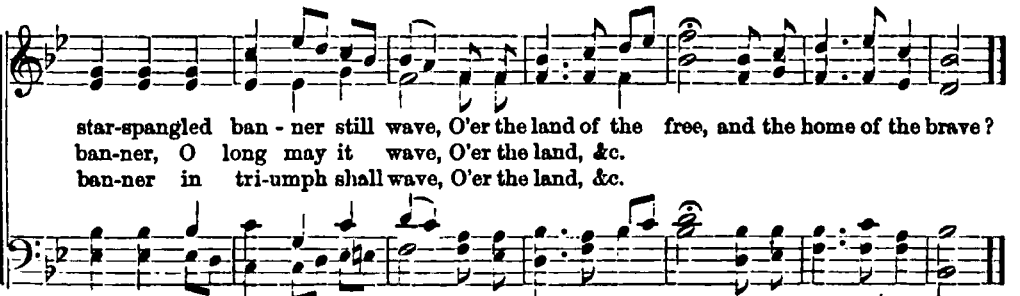
twilight's last gleaming Whose broad stripes and bright stars thro' the perilous fight, O'er the
silence re - pos - es, What is that, which the breeze o'er the tow - er - ing steep, As it
war's des - o - la - tion, Bless'd with victory and peace, may the Heaven-rescued land Praise the



ramparts we watch'd, were so gal-lant - ly streaming. And the rock-et's red glare, the bombs
fit - ful - ly blows, half conceals, half dis - clos - es? Now it catch-es the gleam of the
power that hath made and preserved us a na - tion. Then conquer we must, when our

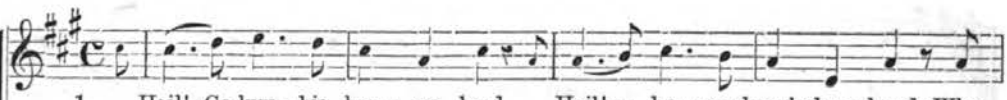


bursting in air, Gave proof thro' the night that our flag was still there; O say, does the
morning's first beam, In full glo-ry re-lect-ed now shines on the stream; 'Tis the star-spangled
cause it is just, And this be our mot-to—"In God is our trust!" And the star-spangled

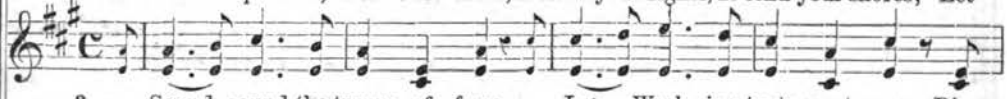
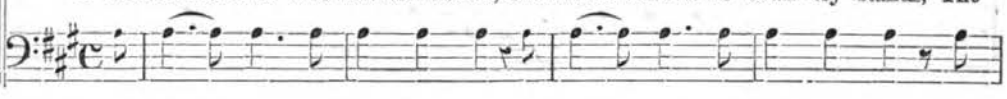
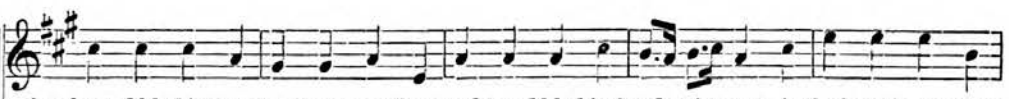


star-spangled ban - ner still wave, O'er the land of the free, and the home of the brave?
ban-ner, O long may it wave, O'er the land, &c.
ban-ner in tri-umph shall wave, O'er the land, &c.


HAIL COLUMBIA.



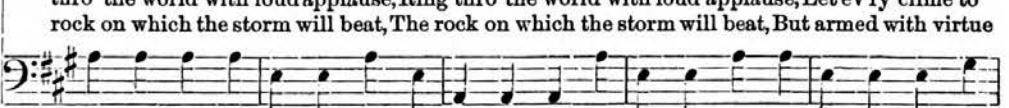

1. Hail! Co-lum-bia, hap-py land, Hail! ye he-ros, heav'n-born band; Who
 2. Im-mor-tal patriots, rise once more, Defend your rights, de-fend your shores; Let
 3. Sound, sound the trump of fame, Let Wash-ing-ton's great name, Ring
 4. Be-hold the chief who now commands, Once more to save his coun-try stands, The

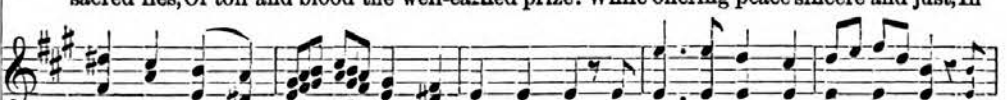
fought and bled in freedom's cause, Who fought and bled in freedom's cause, And when the storm of
 no rude foe with impious hands, Let no rude foe with impious hands, Invade the shrine where



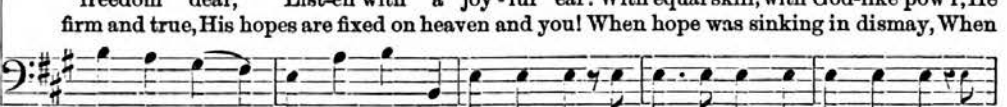

thro' the world with loud applause, Ring thro' the world with loud applause, Let ev'ry clime to
 rock on which the storm will beat, The rock on which the storm will beat, But armed with virtue

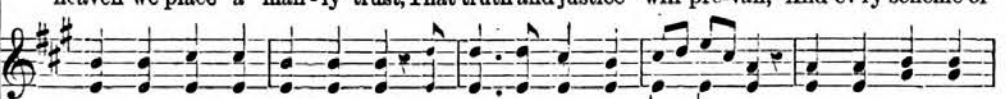
war was gone, Enjoy'd the peace your val-or won; Let in-de-pen-dence be our boast,
 sacred lies, Of toil and blood the well-earned prize: While offering peace sincere and just, In



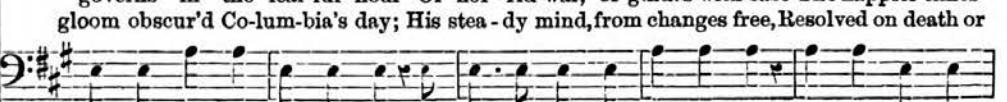
freedom dear, List-en with a joy-ful ear: With equal skill, with God-like pow'r, He
 firm and true, His hopes are fixed on heaven and you! When hope was sinking in dismay, When

Ev-er mind-ful what it cost, Ev-er grate-ful for the prize, Let its al-tar
 heaven we place a man-ly trust, That truth and justice will pre-vail, And ev'ry scheme of



governs in the fear-ful hour Of hor-rid war, or guides with ease The happier times
 gloom obscur'd Co-lum-bia's day; His stea-dy mind, from changes free, Resolved on death or



HAIL COLUMBIA. Concluded.

reach the skies. Firm, u - ni - ted let us be, Rallying round our lib - er - ty,
bond - age fail.

hon - est peace. Firm, u - ni - ted let us be, Rallying round our lib - er - ty,
lib - er - ty!

As a band of broth - ers join'd, Peace and safe - ty we shall find,

As a band of broth - ers join'd, Peace and safe - ty we shall find.

Words by G. P. MORRIS. **HYMN OF THE NATION.** Music by J. R. THOMAS.
In moderate time.

1. Freedom spreads her downy wings, O-ver all cre - a - ted things, Glo - ry to the
2. ho - liest spot, a smiling sun, E'er shed his ge - nial rays up - on, Is that which gave a
3. Heirs of an im - mor - tal sire, Let his deeds your hearts inspire, Weave the strain and

dim.

King of kings, Bend low to him the knee! Bring the heart before his throne, Worship Him and
Washington, The drooping world to cheer! Sound the clar-ion-peals of fame! Ye who bear Co -
wake the lyre, Where your proud altars stand! Hail with pride and loud hurrahs! Streaming from a

cres.

Him a - lone, He's the on - ly King we own, And He has made us free.
lum - bia's name! With ex - ist - ence free - dom came, It is man's birthright here! 2. The
thousand spars, Free-dom's rainbow flag of stars, The sym - bol of our land!

VIVA L'AMERICA:

Home of the Free.

Declamato.

H. MILLARD. By permission.

1. No - ble Re - pub - lic! happiest of lands! Fore - most of na - tions, Co - lum - bia stands;
 2. To all her he - roes, jus - tice and fame; To all her foes, a traitor's foul name;

Ritard col canto.

Freedom's proud banner floats in the skies, Where shouts of Lib - er - ty dai - ly a - rise. "U -
 Our Stripes and Stars still proudly shall wave, Emblem of Lib - er - ty - Flag of the brave. "U -
colla voce.

- nit - ed we stand, di - vid - ed we fall," Un - ion for ev - er, free - dom to all.
 - nit - ed we stand, di - vid - ed we fall," Glad - ly we'll die at our coun - try's call.

Repeat in CHORUS.

Throughout the world our mot - to shall be, VI - VA L'A - MER - I - CA, Home of the free.



NEW YORK,
JULY 1872.

DUTY OF FOREIGNERS IN AMERICA.

OURS is a nation of freemen. We cordially invite all the world who think as we think; who prefer a self-government, democratic, republican, to a hereditary monarchy; and who do not wish to remain under the rule of czars, emperors, kings, queens, princes, popes or priests, to come over and join us. We have rich lands, enough for many millions, and should be glad to have them occupied by real settlers; but we must beg our European cousins, who join us, to leave their "old country" customs in the "old country." When they exchange the old home for the new, let them conform to the customs of the new home. Let each drop his Irish, Scotch, German, French, Italian, or Scandinavian dialect, and at once adopt *our* language, *our* mode of self-government, *our* Fourth of July, *our* Bunker Hill, and throw up their hats and hurrah for *our* General Washington, Benjamin Franklin, Andrew Jackson, Abraham Lincoln, Peter Cooper, and the rest. We can get along very well here without St. George, the Prince of Orange, St. Patrick, or any other "old country" saint. We want only such as are of us or with us; such as believe in our institutions, and who will help to sustain them against all the world. We claim that this is the best country in the world, the best mode of

government in the world, and we will not permit anybody to thwart, overthrow, or interfere with the one or the other. We will correct our own abuses, abolish our own curses, educate all our children—white, red, and black—and convert them into law-abiding citizens. We will also punish transgressors, and shut up in prisons those who abuse their liberty. The experiment of self-government and free religion shall be thoroughly tried in free America, and shall not be "squelched" by bad natives, nor by ignorant foreigners. We have enough meddling in our affairs, and must insist that those who do not like our institutions shall withdraw, or hold their peace.

One is no better or worse for the place of his birth, his kindred, his color, or his pedigree. In the sight of heaven, a man is a man, and no one is *especially* favored more than another. Each is equally accountable to God for the right use of time, talent, and opportunity.

Those born on this soil, and those who come from foreign shores, have, or may have, equal rights, equal privileges, and equal opportunities, for bettering their condition in every honorable and available way; but no man shall trample on, or impair, our God-given rights for self-government, free schools, and free religion. Let the word be CONFORM!

RUNAWAYS.

THE example of Benjamin Franklin, who left home at a very early age without the permission of his parents, has been extensively imitated in this great country. A love for adventure, impatience of restraint, and a weak sense of both filial and moral obligation, are among the causes which induce such departures. A father, who is so absorbed in business that he loses sight of the growing uneasiness or desires of his

sons, and leaves all the care and management of his children to their mother, or to the boarding-school teacher, is surprised to hear that his young hopeful has suddenly left home for parts unknown, without notice. The boy had a great curiosity to see the world. He could not endure the thought of a dull "humdrum life," and was ambitious to try his wings in higher flights than the old familiar sphere of home. Besides, he had the same love of liberty, and the same sense of manliness which his progenitors possessed. He longed to become his own man and master. Would his father entertain the thought of permitting him to go from home before the legal age of twenty-one? Not a bit of it. He would threaten—if inconsiderate enough—all the penalties of the civil law, and would "follow to the ends of the earth" the disobedient and offending culprit, only to secure his arrest and punishment. Rebellion is in every heart. Even George Washington, with all his truth-telling integrity, was found rebelling against the lawfully constituted authorities of King George III. nor did we ever hear of his repenting of the act. Martin Luther was another. And all who break away from creeds, customs, and law—whether they be right or wrong—do so in the spirit of rebellion. This is human nature. It was, is, and will be so, while the nature of man remains as it is. Self-esteem, Firmness, Approbateness, Combateness, Destructiveness, backed by Conscientiousness, *will* assert, acquire, and, if they can, maintain their liberty.

What is necessary for parents to know is, the tendencies of their children's minds, and to minister wisely to their necessities; to do all in their power to *direct* rather than restrain their minds. They should also keep their affections and their fullest confidence. When a son is *afraid* to reveal all his thoughts,

feelings and desires to his father—the one above all others who ought to be his best friend and adviser—there must be something wrong somewhere. When a daughter can not, will not trust her mother to the utmost, and before any other person on earth, we may well look out—there is danger ahead; and a frail human bark may soon founder. Between parents and children there *should* exist the deepest sympathy, the strongest affection—not inordinate—and the utmost confidence. The child is here, not of its own choice, and its parents are responsible not only for its food and clothing, but for its fullest education, its thorough discipline, and its highest development, physically, intellectually and spiritually. Parents owe all things to the child, and, in return, the child owes obedience while a child. But, in the order of human events, the time comes when the child becomes father to the man. Where there is reciprocal affection, where there is authority exercised in reason, in justice, and in mercy, there will be, *must* be respect, obedience, submission. But where there is neglect, severity, or cruelty, there will be just such a state of things as one may naturally expect. Children born of loving parents, in happy wedlock, and who are welcome, will be well-organized, peaceful, amiable, loving; while those born of quarrelsome parents, in unhappy wedlock, and are regretted rather than welcomed, will be quarrelsome, ill-tempered, ungovernable, unfortunate. They may not be imbecile or idiotic, unless dissipation be added to the above-named infirmities, in which case we may look for a fresh batch of tenants for asylums, reformatories, and prisons, where, in the majority of cases, they will only be made worse on account of the bad treatment administered; or we shall have so many more ready-made candidates for the gallows.

In England, school-ships are established in the principal sea-ports, in which young runaways are placed for training. They are thoroughly drilled, disciplined and educated for active service. Hardships are suffered, no doubt, and some deaths occur in consequence; but, all things considered, after long experience, this is deemed the best thing which can be done with the young, would-be vagabonds. Here, we have no such institutions—save one, we believe, in Boston—and, in consequence, we have hundreds of young sneak-thieves, pickpockets and burglars in the streets of our cities, and—for a little while at a time—in penitentiaries, reformatories, and jails. We would place all such as are not disposed to remain under the parental roof, till able to earn an honest living, in school-ships, to be fashioned into self-regulating citizens. Each of our large sea-ports contains enough of this material to fill a big ship, and, with the country runaways who flee to the cities, two or more could be filled. This would free the streets of an intolerable and a growing nuisance, and, at the same time, be of inestimable service to the young scamps and depredators, and, resultantly, to the country. Boys throughout the country would soon take the hint, and wise ones would govern themselves accordingly. There would be less runaways. Parents would know where to look for scapegraces. Our mode of treating a refractory boy would not be by perpetual scoldings, threatenings, or thrashings. If we would overcome another, we must first overcome or subdue our own Combativeness, and substitute Benevolence, kindness. If we would beget or call out love in another, we must first love that other. Love begets love; hate begets hate. Were it not for the mercy, the omnipotent charity of our Heavenly Father, what would become of us? Let us try to do by others, as we would that others

should do by us. Evil is overcome by good, *not* by evil or by violence. Let there be a better understanding between husbands and wives, parents and children. There *should* be community of interests, and each work for the other's good, each share in all the joys and in all the sorrows of the other. This would keep down rebellion, and prevent runaways and domestic shipwreck. Let the authority in the family be always exercised with wisdom, patience, steadiness, charity, and in a prayerful spirit. Charity is one of the greatest powers on earth or in heaven. "God is love."

STRENGTH OF A NATION.

IN what does the strength or power of a nation consist? Is it in the number of men, of guns, or of ships? Is it in extent of domain and colonies, navigable rivers and sea-coast, in minerals or in money? No. Each of these have their uses, and, when combined, add to the material power of a nation. But the *real* strength of a nation, that strength and power which make the individual invincible, are INTELLIGENCE and INTEGRITY, combined with UNITED NUMBERS. An honest man of the same intellectual caliber as a rogue, is always the MASTER; and an honest nation of inferior numbers is the master of a nation of greater numbers with dishonest rulers.

There is nothing more potent to sap, break down, and destroy a nation or an individual, than dishonesty. A few bold, bad men, in places of public trust, demoralize and undermine a state or a nation. Their actions become known to all; their example is followed by many who would otherwise lead honest lives. If the *fountain* be impure, what may be expected from the stream? In view of these facts, we beg every lover of his country to do all in his power to put

down, and root out from public offices all bad men. If our officials can not present a clear, honest record, let them be displaced by those who can.

There are enough godly men in America to fill all places of trust, and there *should* be prisons and asylums enough for all the rogues and imbeciles. Why will not men of intelligence and integrity man this great republican Ship of State, and navigate her? Why permit pirates, robbers and thieves to seize the helm? Rocks and quicksands are all round us, and it behooves every lover of liberty, every Christian patriot, to look well to the management of affairs; to be guarded on every hand lest we go on the rocks and break to pieces. If "eternal vigilance be the price of liberty," let us, American citizens, every one of us, without ceasing, WATCH AND PRAY.

"WHAT CONSTITUTES A STATE?"

Not high-raised battlement or labor'd mound,
Thick wall or moated gate;
Not cities proud, with spires and turrets
crown'd;

Not bays and broad-arm'd ports,
Where, laughing at the storm, rich navies ride;
Not starr'd and spangled courts,
Where low-browed baseness wafts perfume
to pride,

No:—Men, high-minded men,
With powers as far above dull brutes indued,
In forest, brake, or den,
As beasts excel cold rocks and brambles rude,
Men, who their duties know,
But know their rights, and knowing, dare
maintain,

Prevent the long-aim'd blow,
And crush the tyrant, while they rend the
chain:—

These constitute a state."

A NEW AND EXTRAORDINARY FIRE-PROOF COMPOSITION.—An important trial of fire-proof composition was made at Washington the other day, under the direction of the Secretaries of the Treasury and Navy. An iron chest, sixteen inches in diameter, with a lining of six inches of the composition, also containing a wooden box four inches diameter, in which were depos-

ited papers, money and matches, was placed in the blast furnace of the Navy Yard, and different metals placed all round it. After being subjected to an almost continuous blast of three hours, and after all the metals were melted, the chest was left in the furnace until the next afternoon, when under the directions of the representatives of the Government, the three chests were opened, and the contents were found to be in exactly the same condition as when they were put in, and the matches were used to light cigars with. The fire-proof composition is the discovery of two gentlemen of Detroit, one of whom was present at the trial.

THE SHAKSPEARE DEDICATION.

THURSDAY, May 23d, was made interesting to the citizens of New York by the unveiling in Central Park of Mr. J. Q. A. Ward's bronze statue of the "Bard of Avon," in the presence of many distinguished American scholars and of a large concourse of people. Addresses were delivered by well-known citizens of New York, one of whom, Mr. Bryant, the veteran editor and poet, acted a chief part as the orator of the occasion. From his appropriate and beautiful remarks we take the following:

"The fame of our great dramatist fills the civilized world. Among the poets he is what the cataract of Niagara is among waterfalls. As those who can not take the journey to Niagara, that they may behold its vast breadth of green waters plunging from the lofty precipice into the abyss below, content themselves with such an idea of its majesty and beauty as they can obtain from a picture or an engraving, so those who can not enjoy the writings of Shakspeare in the original English read him in translations, which have the effect of looking at a magnificent landscape through a morning mist. All languages have their versions of Shakspeare. The most eminent men of genius in Germany have been his translators or commentators. In France they began by sneering at him with Voltaire, and they end by regarding him in a transport of wonder with Taine. He stands before them like a mighty mountain, filling with its vastness half the heavens, its head in an eternally serene atmosphere, while on its sides burrow the fox and the marmot, and tangled thickets obstruct the steps of the climber. The French critic, while amazed at the grandeur and variety of its

forms, can not help suffering his attention to wander to the ant-heaps and mole-holes scattered on its broad flanks.

"To the great chorus of admiration which rises from all civilized nations, we this day add our voices, as we erect to the memory of Shakespeare, in a land distant from that of his birth, yet echoing through its vast extent with the accents of his mother-tongue, the effigy of his bodily form and features. Those who profess to read in the aspect of the individual the qualities of his intellectual and moral character have always delighted to trace in the face, of which we this day unveil an image, to the public gaze, the manifest signs of his greatness. Read what Lavater wrote a hundred years since, and you shall see that he discovers in this noble countenance a promise of all that the critic finds in his writings. Come down to the phrenologists of the present day, and they tell you of the visible indications of his boundless invention, his universal sympathy, his lofty idealism, his wit, his humor, his imagination, and every other faculty that conspired to produce his matchless works."

SEVENTH ANNIVERSARY OF THE NATIONAL TEMPERANCE SOCIETY, NEW YORK.—During the Anniversary week, in May, this society had an interesting meeting; and from the annual report of the Board of Managers, we learn that the society has never, in any one year previous, issued as many publications as during the year just closed, and never have the topics embodied in the Temperance reformation been more definitely or clearly placed before the public.

Seven volumes for Sunday-school libraries, two volumes of miscellaneous matter, several pamphlets and sermons, and twenty-six tracts have been issued during the past year, besides the *National Temperance Advocate* and the *Youths' Temperance Banner*; the latter, a monthly paper of four pages, having reached a circulation of one hundred and thirty thousand copies per month, and is said to be rapidly increasing. The works of the Association are stereotyped, and thus become permanently valuable.

The printing-press is becoming more an agent for the dissemination of Temperance knowledge than formerly; and while lectures are given by distinguished speakers and others throughout the country, much more de-

pendence than formerly is placed upon this agency. The most zealous heart needs an intelligent head to sustain its interest in a matter of this sort; hence Temperance people should read.

In 1865 the Society and Publication House was organized, and is doing good work in the cause. It has stereotyped and published two hundred and sixty-five publications of all sorts, consisting of text-books, lectures, essays, arguments, history, statistics upon the moral, physical, religious, scientific, political, and financial phases of the question, discussing the nature and effects of alcohol, as well as its place and power; presenting all the phases of the wine question, giving the Bible view and argument, together with quotations from the best authors in the world. These have been widely scattered, and are doing a most useful work.

The officers for the ensuing year are, President, Hon. William E. Dodge, with about ninety vice-presidents, embracing many of the most noted and able men in the country; J. N. Stearns, Corresponding Secretary; T. T. Sheffield, Treasurer; and a Board of Managers consisting of ten persons.

Of late, especially in England, the subject of Temperance is earnestly considered, and in our own State a law has been passed giving the "option" of license or no license to the towns or cities respectively.

It has always been a wonder to us that intelligent human beings, with their eyes open, would deliberately put into the mouth that which would steal away their brain, and make them worse than brutes.

We hope for better days; but the world will not become thoroughly temperate until the elements of physiology are taught and understood in our common schools. When men learn what they should eat and drink, it will be easy for them to avoid errors, because they will have health and coolness of judgment as a basis of proper action.

For \$10 we will send a selection of the best Temperance literature, which may be worth thousands of dollars in many families. Let us save our people from the blight of intemperance by means which appeal to their reason, moral sense, and humanity. Legislation can do much, but enlightenment, through proper instrumentalities, will accomplish most.

Department of Literature, Science, Education.

HOW TO KEEP WELL.

BY HOWARD GLYNDON.

THIS subject, at first glance, appears to be worn threadbare, and it would seem as if very little could be said that has not already been said upon it; yet the reading public is continually crying for "more," and the avidity with which people search out little practical bits on this and kindred subjects, in popular publications, in preference to reading the long, dry medical dissertations which are issued, proves two things: First, that their interest in the matter is unabated; second, that to gain their attention it is only necessary to write in a simple, familiar style, discarding all technical terms and scientific expressions. The popularity of two or three well-known books on this subject, which have been published within the last few years, is illustrative of this.

A man gets into the habit of working early and late; of bolting his meals, and of going straight from the dining-room to the desk. He rides between his house and his office, to save time, and, in short, makes a machine of his body, and another of his mind. Presently both revolt. Neither of them like this *regime* of all work and no play. The body wants rest and fresh air and exercise, the mind wants relaxation and recreation. Each begins to assert its individuality and to conspire for its rights. The man feels heavy and dull. He does less in two hours than he used to do in one. He has no appetite, or his meals do not agree with him. His sleep is broken, and, at last, he begins to wonder what is the matter with him. His next bright idea is that the doctor will tell him, and that the doctor will set it all right. So, to the doctor he goes. Now, once in a long, long while, he will find a precious physician, worth his weight in gold, who will tell him, what the great Stupid ought to know well enough without any telling, that his bad health is owing to non-physiological habits, and that the only way to get well is to give up these. But most doctors will feel his pulse, and look

at his tongue, and scribble a Latin prescription, and send this unobserving creature, who neglects his health to accumulate money which he will not live to spend, back to his old ways again.

Now, every man and woman who gives the least attention to the workings of his or her physical system, ought to know, better than the doctor can, what is, as a general rule, best for himself or for herself, in all except acute attacks, and all ailments which refuse to yield to strictly hygienic living. If you have something the matter with you, you ought first to question strictly your habits of life, and change those that are not altogether healthy. If, after giving this course a fair trial, you are no better, it is then time to apply to the doctor. No matter what he does or advises, you will find that by acting as I have recommended, in the first place, you have been his very best auxiliary. There is nothing that makes a doctor so cheerful and hopeful as to get hold of a patient who has lived a regular life, and on whose self-control and good sense he can depend. In such cases the battle is half-won.

We shudder when we hear of the sudden deaths of those who seemed, up to the last moment, to be in good health. Some of us are ready to say, "What matters it how I live, since death is liable to spring upon me at any moment?" And I reply, that by far the greater number of sudden deaths from disease have had a long chain of aggravating and predisposing circumstances, of which sudden demise is but the natural and legitimate culmination and sequel.

Know yourself, and there will be much less mystery about these things, much less occasion to trust yourself blindly to other hands.

If you were to live in a house all your life, and spend your time in keeping it well-ordered, how could you expect a stranger who should stop before it suddenly some day, to know at a glance just where everything was

just as well as you would yourself, and to be able to decide in a moment, without any previous preparation, just what was out of place here, or what was lacking there? This is just what you expect of the doctor. To be sure, he has dissected a few bodies, he knows something about the location of your heart, liver and lungs; but every disease that fastens itself on you has a cause of being, a chain of circumstantial evidence connected with it, a history back of it, which no one but yourself can trace and appreciate and use profitably. It is the same with every one of your physical and mental idiosyncrasies. You must see that nobody can serve you so effectually, from a sanitary point of view, as you can serve yourself; unless you have, by carelessness or ignorance, brought yourself into that critical state where seconds are golden, where all that is done must be done promptly, and where both your mind and your body are so worked upon that another must take the helm for you.

Yet, how many of us go blindly and passively to the doctor, taking none of these things into consideration, expecting him almost to heal us with a word, as if he had some divine revelation, direct from heaven. We rush to him with every little fingerache and earache, when a little common sense, a little reflection upon the principles of practical science, would teach us what to do.

But there are people who seem to think that a doctor is omniscient and omnipotent, and that a cold sponge bath, or a daily morning walk of an hour, or some simple application which they knew very well beforehand was needed, must work some miracle for them just because he has authorized it.

I think this tendency to go blindly to another for help must be due to that feeling implanted in the human heart which makes us reach our hands up, as it were, to take hold upon something stronger than we are. We are always feeling around us for something wiser than ourselves, something full of redeeming power, to which we may cling.

Yet, after God and nature, there is no physician, for both soul and body, like self-help. Every intelligent and thoughtful man and woman ought, after a little experience, to be able to do better for himself or herself, in all but sudden emergencies, than any one else

can. Some careful observation, some reasoning upon facts, some reference to the past, some taking into consideration of the present, some allowances for the future, will enable nearly all so to order their physical lives that, under ordinary circumstances, they will run on with passable smoothness.

Every human system has its own individual deficiencies and needs. Deficiencies, to be studied and remedied, needs to be met, and stumbling-blocks to be guarded against. You can learn to make a diagnosis of your own state of body, and ascertain what is best for it, better than any doctor can at first sight. You should know what things agree with your stomach better than any one else can. You should know, too, under what circumstances you are most liable to take cold, what degree of heat or cold is necessary to your health and comfort, and, from experience, what quantity of clothing you ought to wear, how far you can walk without over-fatiguing yourself, how much mental or physical labor you are capable of in a given time, on an average, and which of these agrees with you best. Also, whether you are best suited for sedentary or active employments. These are the things that exercise the greatest effect upon health. It is inattention to these details which generates acute and chronic diseases, and calls out and confirms hereditary and constitutional complaints, dissipation being left out of the question.

The ordering of these things is with you alone. If you neglect to take them into consideration, there is no medicine in the Pharmacopia which will do more for you than produce temporary relief. Indeed, this is all that medicine can do for you under any circumstances. It is the province of hygiene to build up, of medicine to alleviate. One cures you, the other keeps you cured; or, still better, prevents you from contracting disease, thus doing away with the need of medicine.

Above all, avoid the common but foolish error of taking the habits and capabilities of others as your *vade mecum*. "Such and such a man works eight hours a day, and so I ought to work eight hours a day." No such thing. If you are stronger than he, you may work longer without hurting yourself. If you are not so strong, you should not work as long as he does. Another man's hours for

work and rest and recreation should be no criterion for you. If you are wise, you will so order your life as to meet the needs and capabilities of your own mind and body, in so far as your circumstances will allow. In this respect, you are either your own best friend or your own worst enemy; and certainly you are your own most reliable physician. Self-knowledge and a proper applica-

tion of it are the only guarantees for sound health and long life. "Know thyself" holds equally as good for the physical as for the mental organization of man.

[In our new journal, *THE SCIENCE OF HEALTH*, we shall present extended views on this subject, and would refer readers to that magazine for general and special physiological and hygienic information.—ED.]

REV. JABEZ BURNS, D.D.

THE brain of this gentleman is evidently large, of fine quality, and more than ordinarily active; yet, sustained as it is by a superior vital organization, the product of a due regard for the requirements of health and sobriety, there is no tendency to exhaustion or premature decay. A happy combination of the several temperaments serves to keep him in good condition, mentally and physically.

He is alive to impressions from without, and has much of that constitutional quality which the French term *susceptibilité*. His feelings are strong to intensity, but his power of self-control is also well marked, so that the action founded on sheer impulse is of rare occurrence in his career.

He possesses much cheerfulness and hopefulness of disposition; is not inclined to despond from any cause; would look

confidently forward to a complete resolution of any difficulty or embarrassment into which he might fall. The religious

element in him is strongly developed; he feels that he is sustained by a Power above—and that he can rest calmly on the hopes and assurances set forth in the Word of his God. He has a firm hold on the future life, and believes that he has a realization of what is signified by faith. That he takes pleasure in doing good,

and that he is sympathetic and forbearing, is manifested in the large Benevolence which towers up from the forehead. He is firm and persistent, however, in the maintenance of his opinion; has an earnest individuality of his own, but can not be charged with arrogance or assumption. He is in a great degree fond of society; believes in domestic life—the home circle has strong ties upon him;



he regards the hearth-stone as the center whence radiate those influences which exert the most powerful effect in reforming and elevating human nature. Intellectually, he is possessed of much strength and breadth of thought and versatility, combined with an excellent practical discernment. There is more originality of thought and purpose indicated than a disposition to imitate. The tendency of such an intellect, influenced as it is by so strong a moral nature, would be toward philanthropy, morality, and religion. His frank and earnest nature would incline him to utter his impressions, and his Benevolence would give them a humanitarian tenor.

The subject of our present sketch, who forms one of the leaders of the "General" branch of the Baptist denomination, was born at Oldham, near Manchester, England, on the 18th of December, 1805. His parents were members of the Wesleyan Connection, and were of exemplary piety, though moving in a comparatively humble sphere of life. His first education was communicated to him at a private academy at Chester, England; afterward, however, he was the favorite pupil of the Rev. W. Winter, M. A., at the grammar school of his native town. Having completed his course there, he went to assist his father in his business as a medical practitioner; and prior to his entering upon the work of his life, we believe he had some experience in other departments of trade. When eighteen years of age he became a member of the Methodist New Connection; among which earnest and devoted people he first made use of those talents which have made him one of the most widely known preachers of his generation. He remained with this body five years. In 1826 he went to London. It was in 1828, we believe, when he avowed a change of view on the question of baptism, and was publicly immersed on a profession of his faith. In 1829 he accepted an invitation to the pastorate of the United Christian Church at Perth, Scotland; and he lived on that side of the border for five years. While there he devoted himself with great zeal to a movement that was at that time in its infancy, and not very

likely to find universal favor among Scotchmen. We refer to the temperance question; and it may be here noted that his enthusiasm in this cause has to the present day shown no sign of diminution.

In 1825 Dr. Burns returned to London, as pastor of the General Baptist church, meeting in New Church Street Chapel, Marylebone; and so uniform was his success there, that it was twice found necessary to enlarge his chapel. He was one of the first members of the Evangelical Alliance, and has never missed any opportunity of raising his voice or using his pen in the cause of Christian Union. In the year 1847 he was chosen by the Association of General Baptists to represent his brethren in a triennial conference of the Free-Will Baptists of America, held in Vermont. Twelve months previously, the Wesleyan University of Middletown, Connecticut, had conferred upon him the honorary title of D. D. Several times has he been chosen as moderator and preacher of the annual assembly of his own denomination. He has been a prolific writer, and many of his productions have met with a very large circulation, not only in Great Britain, but also in the United States. His works may be classified thus: First, those designed for private, and those for general Christian usefulness, as his first three books, "Christian Sketch-Book," of which twelve thousand copies were sold, "Spiritual Cabinet," "Christian Remembrancer." Afterward, the second series of "Christian Sketch-Book," "Christian Daily Portion"—365 readings on the person and work of Christ, "Sermons for Family Reading," a second volume of the same for village worship, "Mothers of the Wise and Good," "Deathbed Triumphs of Eminent Christians," "Life of Mr. Fletcher of Madeley," "Missionary Enterprises," "Light for the Sick-room," "Light for the House of Mourning," "None but Jesus," "Christian Exercises for every Lord's-day," "Discourses on the Various Forms of Religion." Of works designed for ministers and students were, "Sketches and Skeletons of Sermons" (nine volumes), "Pulpit Cyclopaedia," (four volumes), "Sunday-school Sketches," "Christian Philosophy, or Materials for Thought," "Universal Love of God," "Sermons on Scriptural Election." Of works for young people and children,

"Youthful Piety," ditto, second series, "Youthful Christian," "Good Child's Gift-Book," "Scripture Catechism in Verse," "Little Poems," "Missionary Rhymes," "Temperance Hymns," etc.; also "Sabbath Treasure," for children's Sunday reading. In addition to these, "Hints to Church-Members," "A Few Words to Religious Inquirers," "The Marriage Gift-Book and Bridal Token," and it is conjectured that Dr. Burns is the author of "No Better than We Should Be."

As editor, Dr. Burns conducted the *Christian Miscellany* in Scotland—a magazine designed to promote Christian Union; the *Preachers' Magazine*, extending through six volumes; and he was the editor of the London *Temperance Journal* for about seven years. He published, on his return from America, in 1847, a volume describing the scenes and incidents of his travels through 2,500 miles of country. He delivered the inaugural sermon in Manchester on the formation of the United Kingdom Alliance for the Suppression of the Liquor Traffic, and which was published and largely circulated through the kingdom by that society. Dr.

Burns entered on his London pastorate in May, 1835, with a membership of about twenty persons, and a comparatively empty place of worship; his church now numbers upward of five hundred communicants, and a twice-enlarged chapel, with sittings all let, and full congregation.

In 1870 he made a tour through the East, interesting sketches of which were published in English and American periodicals. His second coming to America, which has been announced, will find a cordial welcome from all who are interested in the cause of religion and temperance.

Dr. Burns is powerful and popular as a public speaker, speaking in that only thoroughly effective manner, from the heart to the heart. In this way his earnestness and sincerity infect his hearers with his own enthusiasm. His subjects are always clearly arranged, his illustrations apt and numerous, and his language well-chosen. Although somewhat advanced in years, he is vigorous and sprightly; able to perform a world of work, and ready at all times for work; in fine, anxious to do his best in promoting the welfare of his fellow-men.

THE NEW YORK FREE MEDICAL COLLEGE FOR WOMEN

AN ADDRESS TO THE FACULTY.

BY POLLY A. SMITH.

(Read at the closing exercises of the term for 1871-2.)

TO THE FACULTY, IN BEHALF OF THE STUDENTS.—We, the undersigned, students of the Free Medical College for Women, do hereby tender to our worthy Professors our sincere and heart-felt gratitude for the great privilege we have enjoyed, and the instruction received at their hands. We not only esteem them as gentlemen and ladies of great moral worth and integrity, but count them as among the most worthy, talented, skilled, and scientific Professors of which our noble city can boast. Truly, we have been favored in having tutors of such dignified rank. And, while their untiring efforts in teaching us, their patience with our lack of comprehension, their leniency toward our impromptitude, have been as a sharp reprimand to us, it has also deeply endeared them to our hearts, and inspired us with confidence, that their labors were spent wholly for our

benefit, and to aid us in accomplishing our purpose.

Many of our number are ladies who have passed the meridian of life; who are cumbered with family cares and burdens, and over whose time and attention circumstances have held an almost unyielding control. Others have had to plod their way along as best they could (as the saying is, "on foot and alone"), whose advantages in life have been few, and who, but for the beneficence of this *free* institution, never could have won the honored title of M. D. Yet we have commenced this work with earnest wills to accomplish what we have undertaken; and while we humbly beg pardon for all remissness in the past, we promise, in the future, and until you shall consider us qualified to go forth to the world as physicians, to work with renewed energy and will; to be prompt, persevering, and energetic; and by the zest and

vim of our purpose convince you that we are earnest, true women, working with heart and mind for a noble purpose.

We also tender our hearty, sincere thanks to the Trustees, to the workers, to each and to every one who has wielded an influence, who has put forth a hand, or raised a voice, or lifted a prayer to the Throne on high, for the establishment and maintenance of this Free College; not—as some have maliciously insinuated—to qualify madams and mistresses to perform their direful deeds of iniquity more adroitly and scientifically, but to educate pure, true, noble women to be saviors of their sex.

But to none are we indebted more than to Mrs. Elizabeth Thompson; through whose munificence we to-day are enjoying the opportunity and advantages for which we had before toiled and struggled, "worked and waited," but were unable to obtain. May her declining days be crowned with peace, and her years lengthened out to witness the glorious results which are sure to accrue from her well-timed generosity.

All hail to this auspicious day, wherein the light of divine truth is beaming forth, and under whose genial warmth the cold and dark

clouds of ignorance, bigotry and monopoly are melting away; and thereby making room for new life, liberty, progress of thought, expansion of mind, and higher inspiration; all converging to the development of the one great and grand idea, that *woman* has an equal right with her brother, man, to any and every pursuit for which nature has capacitated her.

With this humble expression of the deep gratitude welling up in our souls, we join in a united prayer for the preservation of the life, health, and happiness of our Professors and their colaborers, and likewise for each other, that we may thereby be enabled to reach the goal for which we run. We subscribe ourselves most devotedly and truly yours,

Lettice H. Doud,	Harriet Doty,
Rachel C. Martin,	B. Cornelia Smith,
Carrie L. Roe,	W. Anna Jones,
Delainia T. Connor,	Hattie M. Turner,
Harriet S. Warren,	Polly A. Smith,
Eliza F. Stillman,	Emma F. Maynicke,
Roxana J. Seymour,	Hermine Grabau,
Georgiana M. Crosby,	Sarah D. Keeney,
Mary E. Stewart,	Kate F. Burgess,
Betsey N. Harris,	Nellie J. Daniels,
Eliza L. Kimpton,	Mary L. Vultee.

THE FIELD OF SCIENTIFIC INQUIRY.

GOLDSMITH says, "How many do we see who might have excelled in arts and sciences, and who seem furnished with talents equal to the greatest discoveries had the road not been already beaten by their predecessors, and nothing left for them except trifles to discover." Alas, poor souls! are they not to be pitied—these unfortunate people who seem to have been intended to make great figures in the world, but, by some mischance, happening to enter it a little too late, they find the secret vaults which they were fully prepared to unlock already opened, and all they can do is mournfully to survey the contents? There were many of these people in the later part of the fifteenth century. They studied Ptolemy's maps and Aristotle's philosophy, and feared lest any saying of those great men might escape them. They seemed to consider the ancients as extremely fortunate in being the first explorers of the fields of knowledge, and imagined that all the choice fruit had been culled, and that nothing remained but the refuse. "The earth is round. I can reach land by sailing westward," cried Columbus. "Ha,

ha!" laughed they. "You, an ignorant sailor, dare to teach the world such things! Don't we know that the land westward is all a delusion, and that you and your ships will be burnt upon the boiling waves beneath the fires of a tropical sun."

Thus there always have been those who seemed amply endowed to make the greatest discoveries, but who were either too indolent or made the sad mistake of imagining that the golden age of discovery and invention was already past; and while they sat in idle admiration of their predecessors and their works, others "stumbled into fame;" that is, as the careless observer would have it, others *stumble* upon something new; but it is far from the truth. If new things were found out by mere accident, the fool and the blockhead would stand an equal chance with the wisest of becoming celebrated. But who ever heard of a dunce making any great discovery? It is always the most intelligent and thoughtful who unveil the hidden treasures of matter and of mind. You may say they *happen* upon them, if you please; but still, the fortunate are those

who would find them if there were no accident, for they see further and look closer than others. They do not always find it necessary to depart from what is commonly called the beaten road; but in the path where thousands have trod before them they unearth gems which others have only buried deeper.

How many millions had looked at the sunlight before Newton, and saw nothing remarkable; but who ever lay in wait for the sunbeam, tore it asunder, and examined its shreds with such minute attention as he? Every autumn, for almost six thousand years, men had seen apples falling; but who ever saw so much in the falling of an apple as Newton? Was it merely accidental that he saw more in this than other people? By no means. He saw more in the sunshine, more in the air, more in everything than other men; for by long and patient application he had learned the *art of seeing* better than any one else. And this is the great secret of success in discovery. Some people live more than three-score years and see nothing unless it has been pointed out to them. The earth might shine with diamonds and the trees bend with golden apples, but they would not observe them until the rest of the world had ceased to wonder at the phenomena. Again, there are others who are continually seeing something new in the most familiar objects. Plants and trees yield more for the enriching of their minds than for the sustenance of their bodies. Nature strives in vain to hide her treasures from them; the greater her care in concealing, the greater their diligence in searching; for it only serves to give them a more exalted opinion of the importance of the wealth she seems to conceal. Of such a character are those who subdue the elements, and make even the most disadvantageous circumstances in nature subservient to the convenience of man; and such a one was Newton.

The mind must continue to discover, or the world relapse into ignorance. It is to the great original minds of this age and of preceding ages, who have opened up new paths and widened and deepened the old ones, that the world owes all its advancement in civilization. And these were all impelled onward to action and discovery by one deep-seated principle—curiosity. Influenced by this, men look in upon the world of thought, and observe the mysterious changes constantly going on. For the gratification of this, they attempt to pry into the nature of the soul itself, and the designs of its great Originator. Moved by this, they search out the causes and connections of

affairs in the material world, and the various uses to which objects may be applied; for of all incentives to mental energy, there is none more potent than curiosity. Nor is the simple discovery of new things the only good resulting from this principle. It encourages the cultivation and preservation of knowledge already gained. What metaphysician would diligently collect all that is known of the mind, if he did not hope by this means to be able to explain other new phenomena? What chemist would patiently go through all the tedious experiments of the laboratory, and carefully study all the different combinations, if he did not believe that there were other elements and other combinations yet unknown? What astronomer would be careful to gather all that has been learned of the stars, and trace the progress of each planet and constellation through the heavens, if he had no hope of discovering other suns with their revolving worlds? What, then, must be the result if the field of knowledge should become completely explored? Would the mind continue to be as active as ever? Would it jealously preserve all it had acquired to the utmost boundaries; or, deprived of its strongest incentive to action, would it not rather sink into indolence? Truth after truth would be forgotten, science after science would be lost in oblivion, and the world would sink to its former ignorance and barbarism, unless, in its downward course, mind should once more be roused, and find a sufficient gratification of its love of novelty in reconquering its former domains.

But would not such a result show that the world was ill-adapted to the human mind? It is impossible to believe that a Creator infinite in wisdom and resources would place mind in a condition so ill-suited to it, that it must some time undergo such a process of degradation. It seems utterly incompatible with his care for the welfare and dignity of his own image, and is altogether unlike the order and adaptation to be observed everywhere in the universe. For every hope there is an expectation. For every affection there is an object. For every lawful desire there is a means of gratification provided; and I have no doubt that there is enough in the world to satisfy man's love of discovery and novelty as long as he remains here. Men have never yet arrived at such excellence in any pursuit as to declare that nothing worthy of acquisition remained beyond them; but if at any time such opinions were entertained, there always have appeared strong-minded, energetic adventurers to prove them false.

If, as is generally believed, no two minds are alike, each must view the world differently and pursue a different course of action, and therefore arrive at new results. This would certainly be the case if it were not for that strong element of the human mind, imitation, which tends to draw all men into the footsteps of their predecessors. We laugh at the simplicity of the Chinese servant, who was careful to break and throw away precisely the same number of eggs as he had seen his mistress break and cast away when she first taught him the art of making custard; but mistakes equally ridiculous are continually made by multitudes in the manner in which they accept the beliefs and follow the examples and precepts of certain great leaders. The most absurd opinions are treasured up and paraded before the uninquiring multitude for centuries, because they have received the sanction of some illustrious character in the past; and some even pique themselves on their careless habits and slovenly manners because they can point to some eminent person as an example. The fact that a few men of acknowledged intellectual power have given no attention to certain subjects, is regarded by some as of almost equal authority with a divine command not to pursue them. Influenced by such principles, is it any wonder that multitudes pouring forward in the paths first broken by a few great leaders, find them all worn and beaten? Such will ever be the misfortune of those who are only imitators. After the multitude has passed on the true philosopher may follow, and

find the way full of novelty. If each intelligent man would carefully develop his own peculiar talents, he would add something new to the general store of knowledge; for it must be that there are as many different phases in which the world may be viewed, as there are minds to view it.

When we consider by what simple means some of the greatest discoveries were effected, we are almost inclined to believe that the people of preceding times were very dull not to have made them long before. Strange, that so little progress should have been made in astronomy, when Ferguson could find out so many things with the aid of only a few strings and beads! Wonderful that electricity should so long remain the terror of man when only a kite was needed to bring it into his service! The lack of enterprise and spirit in physical investigation which characterizes the ages before appears strange to us; but perhaps people a few centuries hence will think us dull for not observing things that shall come to their knowledge through equally simple means; for men shall still continue to surprise themselves with their own ignorance, and the very means by which they elevate themselves will be calculated to make them humble.

Mankind will never have good reason to complain of a poverty of resources in the world; and the philosopher of ten centuries hence may say, like Newton, "I have gathered only a few pebbles along the beach; the great ocean of truth still lies unexplored before me."

J. L. MCCLELLAND.

THE INFLUENCE OF CONSCIENTIOUSNESS.

IN 1866 a merchant received through the Post-office a letter, written in a disguised hand, as follows:

"I owe the firm of — & —, which I stole, and am anxious to pay. I hope to tell you of it personally, some day. In the meantime, I will mail you ten dollars a week, commencing the 1st of July, till paid; interest and principal will be two thousand dollars. . . . Do not try to discover me. I send one dollar now; if you accept, please advertise in the *Herald* 'Personals,' and sign yourself x. r. z."

The merchant replied as requested. Every week, from that date, an envelope was received through the mail, inclosing ten dollars, with no other writing but the number of the payment, until the two-hundredth payment was received,

with the following lines, written in the same disguised hand:

"TWO-HUNDREDTH PAYMENT. I send ten dollars more; if you have got them all, please advertise in the *Herald* 'Personals.' If not, please advertise how many are lost, and I will send them."

The merchant replied, "The two-hundredth payment is received. All right. Come and see me, and your name shall be sacredly confidential." A few weeks after this, a young man met this merchant on the sidewalk, and handed him a copy of the New York *Herald*, pointing out an advertisement under the head of "Personals," and, with a trembling voice, said: "I am the person who wronged you while in your employ, and have been making

my weekly payments to you until I paid the debt, which I hope God has forgiven."

"Never was my surprise greater," says the merchant who communicates this fact, "than to stand before the individual who had for two hundred weeks, without fail, paid me out of his earnings, the amount he had taken from me; and he, one of whom I never had the least suspicion."

Such an instance of continued steadfastness of purpose and unostentation is evidence of true penitence and thorough reform. It should be recorded as an example for every one who has been guilty of this sin. It is proper to add that this young man is now in a prosperous

business, enjoying the confidence of his fellow-men, and is a worthy member of a Christian church. "Blessed is he whose transgression is forgiven, whose sin is covered."

[We may add a word or two, to the effect that this may be regarded as a case of an awakened conscientiousness which strengthened its influence with the persistence of the young man in restoring what he had embezzled. After such a course of rigid discipline as this series of slow payments must have been, the young man doubtless attained a height of moral integrity quite removed from the probability of similar dishonesty, and his after career of manliness was insured.]

THE LATE JAMES GORDON BENNETT.

JAMES GORDON BENNETT, the well-known editor of the New York *Herald*, died at his residence in that city on the evening of the 1st of June. He was born about the year

1795, at New Mill, Keith, in Banffshire, Scotland. He remained at school in his native place till he was fourteen or fifteen years old, when he went to the Roman Catholic seminary in Aberdeen, with a view of preparing for holy orders in the Roman Catholic Church, of which his parents were members. He remained at this institution for two or three years, when, giving up the idea of becoming a

priest, he determined to emigrate to America. Arriving at Halifax in 1819, he engaged in teaching, but the occupation not suiting him, he soon abandoned it and made his way to Boston, where he became proof-reader in the publishing house of Messrs. Wells & Lilly.



In 1822 he went to Charleston, South Carolina, where he became connected with the *Courier* as translator from the Spanish-American papers for that journal. He remained in

Charleston only a few months, when he came to New York, where, after several not very successful attempts at journalism, he finally became associated with M. M. Noah in the editorship of the *Enquirer*. After the fusion of this paper with the *Courier*, he continued his connection, and in 1829 became an associate editor of the *Courier and Enquirer*, which position he continued to hold until 1832, when a difference in political

opinion between him and the editor-in-chief, Col. Jas. Watson Webb, led to his retirement; and in October of the same year he issued the first number of a new journal called the New York *Globe*, devoted to the cause of Jackson and Van Buren. It was soon discontinued.

Mr. Bennett next became part proprietor and principal editor of the *Pennsylvanian*, a daily journal published in Philadelphia. He continued this publication till 1834, when he returned to New York, and in May, 1835, issued the first number of the New York *Herald*, with which he has been identified ever since.

Mr. Bennett was about six feet in height, and

weighed, in his prime, not far from 175 pounds. His brain was large, and his perceptive faculties very prominent. Self-Esteem, Firmness, and Combateness were all prominent. He was eminently self-relying, and indifferent to the opinions of others. Such an organization would work or fight its way up against almost any obstacle, and society will accord him the position he merited.



THE GREAT MUSICAL FESTIVAL.

THE World's Peace Jubilee, at Boston, promises to be one of the grandest affairs in the history of music. Distinguished European composers and vocalists, famous English, German and French musicians, in several cases whole bands, will take parts in the programme, thus giving the undertaking a truly international character. It is estimated that orchestra and chorus will number at least twenty thousand persons. Many of the features of the last Jubilee will be repeated, on account of the enthusiasm with which they were received, but on a grander scale; and efforts are being made to increase the facilities of travel and accommodation, so that the people in all parts of the land may be more fully represented among the visitors. A view of the Coliseum, in which the concerts will be given, is shown in the engraving. It is a light and airy structure, and of very graceful proportions, considering its great size; it covers a space, we believe, of fifteen acres, and will accommodate probably

40,000 persons. For our own part, we cordially wish that the affair will be attended with the best success in all respects.

OUR HANDS.—The human hand is so beautifully formed, it has so fine a sensibility, that sensibility governs its motions so correctly, every effort of the will is answered so instantly, as if the hand itself were the seat of that will, its actions are so free, so powerful, and yet so delicate, that it seems to possess a quality instinct in itself, and we use it as we draw our breath, unconsciously, and have lost all recollection of the feeble and ill-directed efforts of its first exercise, by which it has been perfected. In the hands are twenty-nine bones, in the mechanism of which result strength, mobility, and elasticity. On the length, strength, free lateral motion, and perfect mobility of the thumb, depends the whole power of the hand, its strength being equal to that of all the fingers.

Without the fleshy ball of the thumb, the power of the fingers would avail nothing; and accordingly, the large ball formed by the muscles of the thumb is the distinguishing character of

the human hand. For engraved illustrations, showing anatomy of the hand, and all about palmistry, the line of life, etc., see "New Physiognomy."

ROCKY MOUNTAIN ECHOES.—No. 1.

PIKE'S PEAK.

WITHIN the shadow of thy breast I sit,
And watch the sunshine fall upon thy head,
Oh, grand and mighty Peak of Pike! around
Whose brow the storms of centuries have swept,
While Night and Day for untold eons fought
To win thee to their perfect vassalage—
But fought in vain; for when thy feet were wrapt
In shadow, on thy breast the dawn lay soft
As amulet of love on maiden's heart,
While o'er thy forehead surged the shining light
That heralded the perfect risen day.

Could I but bring
My thought to bear upon the ages past,
Since first thy summit pierced the inland sea,
And kissed the daylight or looked up with awe
On stars thick set in unknown belts of space,
Or trace thy history down the scale of Time,
And read thy conflicts with the powers that dwell
In water and in wind and in the fire,
Till thou didst burgeon into blossom—time
Of evergreen and of eternal bloom—
It would branch outward till my finite mind
Would falter at the verge, and hesitate
Long ere the preface had been read. For thou,
Perchance, ere Noah sent the white-winged dove
From out the ark, hadst looked the world across;
Nay, more, ere Adam in the garden walked,
Thy forehead had been kissed by sun and storm,
Had been baptised by centuries of years,
And had grown hoary long before the gates
Of Eden closed upon the exiled pair;
And, later still, when Solomon, the Wise,
Sent sailing ships to Ophir, in the west,
Thou couldst have watched them pass the stormy
cape
And reach the shores that shone with golden sand,
And smiled with scorn, since in thy rocky heart
All precious things were hid, to wait the time
When all the subtler essences of life
Had lifted human kind to higher planes.
I watch that smile continued in our day

To see the search renewed; where on thy slope
The miners toiled, unwitting that the air
They breathed was an elixir such as men
Had died for want of, ere Sesostris reigned.
And could thy spirit to their ears convey
Thy meaning, thou hadst said in thunder tones,
That would have reached the Aleutian Isles,
And echoed where the walrus seeks his prey,
In southern zone, that not in shining sand
Thy treasure lay, but in thy ambient air,
Surcharged with all the elements that go
To strengthen and to lengthen human life.

I think of these,
And of that hour in last year's summer-time
When, in the silence of the night, I lay
Upon thy rugged breast and watched the stars,
And questioned them of thee, but all in vain;
They, like their queen, were dumb, although their
lips
Did twinkle with the secret kept within.
Oh, mighty mother Nature! at thy feet
I kneel, an humble worshiper of thee;
And as I kneel the strength that in thy breast
Lies sentient, by electric touch I feel
Course through my veins, and twine around my
heart,
Until I feel, as Samson felt of old,
Strong-armed, strong-limbed, an athlete in my power.
At noon of day with radiant sunshine swept,
Or noon of night by magic moonlight crowned,
Or when the genius of the storm steps down
And scatters thunder-bolts, like Jove of old,
Or when the white-robed spirit of the snow
Spreads her unsullied fleeces on thy breast,
Or when by starlight all thy massive grandeur lifts
Above the foot-hilled children at thy base,—
It matters not; who once upon thee look,
Are rapt, like Endymion by the sea,
And ever after know a new delight.

WILLIAM E. FABOR.

COLORADO SPRINGS.

PRIMARY COLORS.

[CONTINUED.]

WHEN the old method of the supposed analysis of solar light by a prism has been fairly presented and examined, with its prominent faults clearly shown, can it be possible that any candid scientist is to be found still willing to uphold such an antiquated method as a tangible expression of its capacity? To analyze is to separate and de-

tect each component of a compound, and to affect to do this by simply looking through a piece of triangular solid glass, or to do the same thing by passing its rays through such glass upon a screen for our inspection, seems to be only worthy a juggler or necromancer's art of analysis, playing with a toy prism, which, at best, only gives an abnormal or

distorted view of its character, as regards its direction, form, and colors, through refraction and dispersion—the latter, probably, determining the colors.

Thus to call a prism of solid glass an analyzer of solar light, seems a positive misnomer—a perversion of language—in its ordinary chemical sense. White glass admits the passage of solar light, heat, and actinic rays, in undiminished force, though it effectually bars the passage of artificial heat while freely admitting light to pass through; but this is not analysis. Such solar compound must either pass homogeneously, in its entirety, or it cannot pass at all, since glass can have no *interior* power to separate the atoms from each other, and collect and send each color, by itself exclusively, in a broad ribbon upon the screen, which all candid thinkers must at once confess when these reasons are brought fully to their comprehension. There is neither repulsion nor attraction embodied in that *passive* glass to separate the supposed colors, nor to collect them again within its solid mass, in order that each color may thus be separately transmitted to the screen for our inspection of the true components of white light. Neither is there any chemical attraction by interposing a lens, in which the whole is again restored to white light, the same being only a convergence of the rays previously scattered by the prism's distortion of its real character, thereby giving an unnatural direction, form, and color to the rays of light, which have so long misled philosophers as its supposed analysis.

Thus, I think, it should be acknowledged that the prismatic colors are *immaterial*, and so cannot be a part of anything, being solely the effect upon the eye of an abnormal expression of light, in which the colors are produced by the intervening distortions of a prism. The same *immateriality* to the prismatic colors from solar light must be admitted to apply by that class of scientists who claim that light is only an effect of atoms turning on their axis—"a mere mode of motion"—thus proving conclusively that such colors exist only in an unnatural effect of white light upon our vision, when distorted or falsified by refraction, as in the case of the direction and form of the rays.

If the prismatic colors are still really be-

lieved to form white light, they must, by the same philosophy, be supposed to be intimately mixed, as in all chemical compositions, by an atom of each color blending, and these groups combining to form the general compound of light, which, as heretofore said, was necessary to produce white light.

Now, if each separate color, either on the corpuscular or undulatory theories (*i. e.*, actual transmission of atoms, or only successive wave-like impulsions), have each their respective wave lengths, varying between 458 and 727 millions of millions of waves per second (as calculated), such irregularity of motion to each different colored atom would effectually prevent their combination, or intimate blending of atom to atom of each color, to form groups of all the colors for a chemical compound, as heretofore assumed to be necessary to constitute white light. Thus the individual colors not keeping time in oscillations, or measure of propulsion, such colors cannot be intimately blended; therefore such confusion in the transmission of rays of different colors ought to cause that interference which is productive of no light at all, rather than white light. The atoms of each color, if they exist, must have an equal wave length, as well as an equal progress; otherwise white light cannot be composed of all the colors blended when they are respectively transmitted, and arrive at different times.

A circular card, painted in sections, to represent the prismatic colors, when revolved so rapidly that the eye cannot see either separately, does not blend the colors, as supposed, to produce white, as an evidence that white light is composed of all the colors. This assumed analogy gives merely a blurred impression of some light reflected from its general surface—just as a light-colored spoked wheel may be revolved so rapidly that neither spoke is seen separately, but a general blurred impression, as of light reflected from a solid surface, which we know it is not; but it might as well be inferred that the dark interstices between the spokes reflect as much light as the spokes, as to infer, in the case of the colored card, that it reflects as much light from the dark as from the light colors; whereas, it is only the light reflected from the light colors of the card and the light colors

of the spokes, which particularly impress our vision, both being revolved so rapidly that there appears no interruption between such light-reflecting surfaces. Such illustrations of the composition of white light must be viewed as only the romance of science—the *ignis-fatuus* by which philosophers have been so long misguided in the search for some tangible proof of their magic-colored lights.

CHARLES E. TOWNSEND.

POPULATION OF CITIES IN THE CANADAS, or the Dominion, as it is called, according to a late census:

	1861.	1871.	Increases.
Montreal	90,333	107,223	16,902
Quebec	51,109	59,099	9,590
Toronto	44,821	56,092	11,271
St. John, N. B.	27,317	29,303	1,986
Halifax	25,026	56,863	31,837
Hamilton	19,086	26,716	6,710
Ottawa	14,669	21,543	6,876
Kingston	13,743	12,407	De. 1,336
London.	11,535	15,826	4,271

When our neighbors conclude to come under the Stars and Stripes, we shall anticipate a more rapid settlement and development of that country. How soon?

WISDOM.

THE friend who hides from us our faults is of less service to us than the enemy who upbraids us with them.

A GENEROUS mind does not feel as belonging to itself alone, but to the whole human race. We are born to serve our fellow-creatures.

"It is not so far as a man doubts, but so far as he believes, that he can achieve or perfect anything. All things are possible to him that believeth."—*Robertson*.

THE faculty of accommodating one's self to the reverses of life, and of extracting honey out of the bitter things of this world, if it be not true philosophy is something almost as efficacious.

"Show me the man you honor: I know by that symptom, better than by any other, what kind of a man you yourself are. For you show me there what your ideal of manhood is; what kind of a man you long inexpressibly to be."—*Carlyle*.

LEARNING will accumulate wonderfully if you add a little every day. Do not wait for a long period of leisure. Pick up the book and gain one new idea, if no more. Save that one and add another as soon as you can. Says the old Scotch adage: "Many a little makes a mickle."

It is not the best thing—that is, the things which we call best—that makes men; it is not the pleasant thing; it is not the calm experiences of life; it is life's rugged experiences, its tempests and its trials.

MIRTH.

[Under this heading we propose to publish
"A little nonsense now and then ;"
which
"Is relished by the wisest men."]

"I SAY, John, where did you get that rogue's hat?" "Please, yer honor," said John, "it's an old one of yours that missis gave me yesterday."

"I WANT a Young Men's Companion," said a spruce customer to a book-seller. "Very well," said the book-seller, picking up a volume, "here's 'My Only Daughter.'"

AN editor says that the only reason he knows of why his house was not blown away the other day, during a severe gale, was because there was a heavy mortgage upon it.

A MAN at a camp-meeting boasted that he had been married twenty-five years, during which time he had never given his wife a cross word or look. He omitted to tell his hearers that he dared not do the one or the other.

A MAIDEN lady, who had once been jilted, wrote her own epitaph, as follows;

"Here lies the body of one
Who died of constancy alone.
Stranger! advance with steps courageous,
For this disease is not contagious!"

AT a juvenile party, one little fellow, rejoicing in the splendor of his new clothes, sidled up to another with the triumphant remark, "You ain't dressed as I am." "Well," retorted the other, "I can lick you, anyhow."

"YOUR honor," said a lawyer to a judge, "every man who knows me knows that I am incapable of lending my aid to a mean cause." "That is so" said his opponent, "the learned gentleman never lends himself to a mean cause, he always gets cash down."

NOBODY.

Returning home at close of day,
Who gently chides my long delay,
And by my side delights to stay? Nobody.

Who sets for me my easy-chair,
Fixes the room with neatest care,
And lays my slippers ready there? Nobody.

Who regulates the evening fire,
Piles the blazing fuel higher,
And bids me draw my chair still nigher? Nobody.

When sickness comes to rack my frame
And grief disturbs my troubled brain,
Who sympathizes with my pain? Nobody.

Our Mentor's Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of its early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage.

HANDWRITING.—Can you read the character by the handwriting as well as by a likeness?

Ans. All that a person does partakes more or less of himself—of his character and disposition—his handwriting, his style of making anything in mechanism or arts will be more or less molded by his spirit. Penmanship is subject to many conditions. Sometimes one learns by imitation, and has the style of the teacher; sometimes one writes so little as not to become expert. If one walked or worked as little as some write, the walk and the work would be as awkward and poor as the penmanship. Some are in a nervous hurry to keep pace with the fiery thought, and their writing is angular, rough, and scarcely legible. The same person, if writing an important paper, a deed or a will, or were engrossing complimentary resolutions to present to some eminent person, the penmanship might be clear, tidy, and beautiful. When one knows how, by practice and proper instruction, to write freely, his nature and character will be brought out, to a certain extent, in the penmanship. In "New Physiognomy" there is a chapter, beginning at page 623, on "Graphomania, or Character in the Handwriting," illustrated by numerous specimens.

We much prefer the likeness of persons as a means of judging the character. Those wishing to send for descriptions from likenesses may inclose stamp and ask for "Mirror of the Mind," which will give instructions as to how likenesses should be taken for that purpose, and also the measurements of head and body desired, with the weight, complexion, etc., required.

PHRENOLOGY AND RELIGION.—Are not some of the principles of Phrenology in antagonism to Christian doctrine, that every man has an equal chance for salvation? If a man is so unfortunate as to have very small Veneration and Spirituality, will his chances for eternal life be made few thereby?

Ans. We have been accustomed to think and to teach that moral responsibility is graded, perfect-

ly, on the talent, capacity, and moral endowment of the subject, whether he have much or little capacity. Happiness in the present life is not, and it is supposed that in the life to come will not be, precisely alike to all. We suppose that all men can understand that rewards and retributions will be measured according to what a man hath and useth, not according to what he hath not. Therefore men's responsibilities are measured exactly by the power and capacity they have to do the duties imposed upon them. If you will read the Parable of the Talents, as recorded in the 25th Chapter of Matthew, from the 14th to the 27th verses inclusive, you will find this idea finely brought out, and, as we understand it, it is in harmony with common sense and Phrenology.

THE FLESH-BRUSH.—Will the daily use of the flesh-brush make one less susceptible to atmospheric changes?

Ans. External influences would doubtless have the effects referred to. The flesh-brush, if it be very stiff, is rather rough treatment for the delicate skin of the human body, and we think it should be used mainly as a means of cleansing the skin and opening the pores, if used at all; but good soap and water, and a vigorous rubbing with the hand, will generally answer the purpose. Exposing the surface to the weather obviates the tendency to take cold. Persons accustomed to muffling up the neck on going out are very apt to have sensitive throats, and we know those who have thrown all mufflers aside, and not even turning up the coat collar, have ceased to be troubled with throat difficulty, we mean from ordinary colds. We do not take cold by the back of the hand or by the face. When the Indian was asked if that part of his flesh which was exposed were not cold, he asked of the questioner if his face were cold, and getting the answer, "No," replied, "Me all face." If men will wear warm clothing on the feet and legs, if they keep the hands and arms warm, there will be but little trouble with the trunk. People are apt to bundle up the neck and shoulders too much, and to leave the extremities unprotected. One has only to look out on the street in wintry weather and see many children with fur cap and ear-pieces, with warm mufflers and fur capes, and, perhaps, thick clothing, going nearly to the knees, while the legs and feet have thin drawers, thin stockings, and a gaiter tied tightly around the ankle, and possibly an india-rubber shoe. Now, if the dress were properly adjusted to the limbs, the fur around the neck and ears might be largely dispensed with, but muffling

one part of the body, which does not need it, and exposing the extremities, which do need protection, is a very improper method of treatment. It fills many thousands of short graves, and renders many other thousands of lives miserable and burdensome from broken constitutions. When will mothers in cold countries learn to ignore fashions started in warm latitudes, and for the sake of having their "little dears" look like French fashion-plates send them to early graves or to invalid lives? The shades of a million slaughtered innocents echo, *When?* —

OPIUM.—Both the white and black varieties of the poppy afford this product, but the opium of commerce is mainly obtained from the white. The process of extracting opium is similar in all cases, and varies but little from the method described by writers as practiced two thousand years ago. The bulb, or capsule which contains the seeds, is the seat and source for obtaining the opium.

Incisions are made in the unripe capsules a few days after the fall of the flower, care being taken not to penetrate the internal cavity of the shell. A white substance exudes and forms like tears on the cuts. This is left for twenty-four hours, when it is scraped off in brownish lumps with blunt knives. When thus gathered it is in a glutinous state, and when of the right consistency it is folded in leaves and is ready for the market. Each capsule yields but a few grains of opium, and but once. The seeds of those capsules which have been cut are gathered for planting. In India the capsules are cut with a many-bladed knife. The opium when collected is put in jars for transportation to the factories, where it undergoes a process to purify and prepare it for the market. It is made into balls and packed for sale in chests in layers, with leaves of the poppy-plant between them. The opium of commerce is mostly produced in warm countries. In England and in France, however, very fine opium is produced. We are not able to state the value in small quantities, but believe it to be about six dollars a pound in bulk.

LIGHTNING-RODS.—A correspondent inquires whether or not we consider lightning-rods of any advantage.

Ans. We certainly do, provided they are properly put up. Errors have been made in the preparation of lightning-rods, especially with reference to the quantity of metal used. We think, as a general thing, the rods are not large enough for the purpose. Experiments have shown that a bar of iron of about one half-inch thickness is necessary to exert a protecting influence on the building when the thunder-cloud possesses an unusual quantity of electric fluid. An insufficient lightning-rod is worse than none at all. Care should be taken in attaching rods to houses, although it is unnecessary that the connections or braces be insulated. The rod should also be sunk to a good depth

beneath the ground, and it is well to have the lower point in contact with water, or some other extended conducting surface, say an under drain or iron pipe. It is very important that the lower extremity of a rod be in communication with a good conducting medium, so that the electric fluid shall be dispersed. Lightning-rods are made after various patterns, more or less ornamental; but we are of the opinion that a plain bar one inch wide and half an inch thick, properly pointed at its upper extremity, would be equal to the best.

TAMMANY RING.—What is the origin and working of the Tammany Ring?

Ans. "The Tammany Society or Columbian Order," was established as a secret political organization many years ago, and its object was to favor patriotic measures in opposition to kingly and aristocratic prerogatives. For a quarter of a century past it has been the head-quarters of the New York Democracy, and of late years has arrogated to itself the task of controlling, not only the New York city politics, but those of the State and nation as well. For a few years past it has been under the control of selfish, grasping, and ambitious men, who have misapplied their power and called down upon their heads the indignation of the public, and evoked the authority of law to punish them for their misdeeds. The society being a secret order, and the members elective, the leaders, or sachems as they are called, had every chance to mold political matters and control affairs for their own pecuniary and personal benefit.

TRANCE.—A young lady in Ohio, under religious excitement, went into a trance. While in that state she told the day and hour that she would wake, which would be three days and eighteen hours after she became affected; and she awoke at the minute. She knew who came and went; she describes happy and unhappy scenes which she saw during her trance. What is the cause of such a state, and does the subject have a consciousness of passing events?

Ans. A trance state results from some peculiar condition of the mind and nervous system. Some, like the lady in question, appear to be conscious, can read or see persons with the eyes closed, being in a state called clairvoyant. This word is quite as full of mystery as that of "trance." There are thousands of facts in the books as wonderful as this, and the explanation is about as difficult as is that of the word "life."

A LADY COPYIST.—I am a young lady; have been teaching a country school the past five years, and now desire to become a copyist, and to live in New York. Will you please inform me what are the duties, and what the pay for copying? I write a free, plain hand with rapidity.

Ans. There is, we doubt not, a great deal of copying to be done in New York, and we are certain that very many desire to do such work who can not get it to do. In other words, the market is overstocked with copyists. As to the usual

compensation we have no information. A woman who is a good scholar, and a good and rapid writer, if she understand phonography, would be likely to obtain a good situation to take dictations and write out the matter. The regular price paid is six cents per folio, first copy, and four cents per folio for duplicates. One is not sure of constant employment. The work fluctuates; at one season one must work night and day, at another, there may be weeks with nothing to do. Better learn phonography, and become a reporter.

BORN BLIND.—Is it possible to teach a person who was born blind and deaf?

Ans. Yes. Laura Bridgeman, who became blind and deaf while very young—too young, indeed, to carry any memory of seeing and hearing—was taught to read, write, and talk with the mute alphabet, and she can do worsted work in crochet, selecting colors by the sense of touch, and working them nicely into lamp-mats, tidies, etc, which she makes; and this she does with a skill not easily equaled by those who have all their senses in a perfect condition. We have seen her and her work.

MEDICAL QUESTIONS.—In future we shall give answers to medical questions in our new journal, *THE SCIENCE OF HEALTH*, that being the more appropriate. See list of CONTENTS of No. 2 in advertising department.

MUSIC.—How can I learn to play a tune on a violin or other instrument when I can not whistle a tune?

Ans. We know persons who have good talent for music and can play well but can not sing for want of vocal adaptation. If you have no "ear for music," and can not appreciate it, you can not play the violin. You might learn to play the melodeon by mechanical skill, but unless you have musical taste you will never excel in musical performance.

MELTING INDIA-RUBBER.—Can you inform me through the *JOURNAL* with regard to the process of melting India-rubber?

Ans. We used to see farmers melt crude rubber with tallow to put on their boots in winter, just as they melted beeswax. The march of improvement in the rubber business within thirty-five years, from the time when the only use to which rubber was put was in the manufacture of awkward overshoes and for erasing pencil marks, has been so great, so multiform, and so wonderful, that one must "read up" to acquire any considerable knowledge on the subject. If one would write to the Rubber Company at Colchester or Naugatuck, Conn., the required information *might* be obtained.

YOUNG PAINTER.—You are about the right age to commence the study and practice of the artist. You should, however, possess a good knowledge of the fundamental branches of an English education. Of course, in connection with

your study of art, you would wisely avail yourself of all opportunities for the general improvement of your mind.

What They Say.

CAUSES OF DISEASE.—"Causes, causes, and again causes—more and more we fall back on these as the chief objects of our attention," exclaims Dr. Oliver Wendell Holmes, in his address before the Massachusetts Medical Society. To seek the causes of disease and deformity and shun them, is far more important than running after nostrums and drugs to cure them. Even the cure, as Dr. Holmes intimates, is more likely to be effected by the putting away the cause of the disease than by dosing; and a cure cannot be expected while the cause remains operative. Notwithstanding nostrums and drugs and even doctors, the melancholy fact stares us in the face, that nearly one half of the children born, die before they are ten years old, and multitudes who live, spend but a miserable existence. Well may this venerable physician suspect, that the chief objects of attention in the practice of medicine, should be to discover the causes of disease. All diseases result from a violation of physical or mental laws, and yet the great mass of the American people seem to be almost totally indifferent as to the causes which are producing so much suffering, so many premature deaths, and which are, in the opinion of many careful observers, slowly but surely impairing the vitality of the American people. It is time that attention was called to this subject. Is human life of no value?

Diseases not only have an exciting cause, but also, what physicians call, a predisposing cause. The latter is generally some slow and often imperceptible agency, which impairs the vitality of the system, or prevents its development, and renders it liable to be affected by even slight, exciting causes. It is owing to the action of such causes, and hereditary predisposition, which is generally but a culmination of such causes, that one child dies from an amount of exposure or irregularity in diet which does not harm another. No careful observer can view the pale-faced, delicate children in our streets, schools, and parlors without feeling that they are subjected to the action of the predisposing causes of disease to a fearful extent. My heart is sad as I view them—at best but victims in training for a life of suffering and premature death. What are our parents thinking about!

Sunlight, air, and exercise are the great necessities of life; raiment and food may be indifferent if the child has a bountiful supply of the former, but without them the utmost care in diet and clothing will not generally develop substantial bodies, and preserve health. Not that the proper diet of all children is not important, for it surely is worthy

of more attention than is generally bestowed upon it, but the power to appropriate food for the building up of healthy and substantial organizations depends upon a due supply of the other necessities.

But to consider either of the above subjects properly would require several articles of the length of this. Enough perhaps has been said here to set the reader to thinking, and to induce him to seek information in regard to the causes of the suffering and mortality among us; for only by putting away the causes of disease can our race improve in development and health. Medicine, at best, is but palliative, while causes are operative.

J. ELLIS, M. D., NEW YORK.

A TABLE-TALK ON PHRENOLOGY.—The Chicago *Evening Post* treats the subject from a humorous point of view as follows:

That Phrenology is a wonderful and infallible science the Table-Talker can not permit himself to doubt after reading the unbiased testimony of Messrs. Fowler & Wells. It has often occurred to him that this truly remarkable ology might be used with advantage in our public affairs. We might have a phrenological instead of a competitive examination, and bestow office only upon those people whom the bumps, which can not tell a lie, declared fitted especially therefor. Combativeness would be expected in all candidates for cadetships; no one should enter the Department of State who had not Secretiveness and Caution as big as hen's eggs; the Secretaryship of the Treasury would demand almost abnormal Order, Reverence, and Candor, and no Acquisitiveness whatsoever. Carrying out this idea to its legitimate results, there is no reason why we should not found the pillars of domestic and social peace on the bumps of Philoprogenitiveness and Love. The lover of Belinda; though his boots might shine as glass, and the pregnant hinges of his knee crook with unimpachable elegance in the mazy waltz, would find his sham protestations of affection worthless and ineffectual when the back of his head was as level as a prairie. "Adore me, do you? Where's your Amativeness? Love and cherish me through life? Oh, Alfred, can I trust my future to a man whose ears stick out with Combativeness?" The reader can easily see to what uses the science of Phrenology may come in the not far-distant future. Some glimpses of this millennial epoch, when society shall become a mere Golgotha, or place of a skull, have induced the Table-Talker to throw into rhyme the advertisement of the coming phrenologist, as follows:

Come, folks, come, to my phrenologic lecturing,
Every mental faculty I can decry;
Lend me your heads—I'll silence all conjecturing,
My bump-interpretations none deny.
This thing, good folks, is not a hoax,
My system orthodox is,
Just only now my hand allow
To feel your knowledge-boxes!

Love's ogings now no emotion of the soul imply,

Lavater's teachings we must all renounce,
Grog-blossoms no devotion to the bowl imply,
Propensity we only see upon the scone.

The swelling heart can ne'er impart
Its failings by the throbs alone;
The head that swells much better tells
By showing of its knobs alone.

Candidates for Congress, of suffrages solicitous,
Must go in shoals with shaven polls to canvass
votes;

And matrimonial suitors, to terminate felicitous,
And woo sincere, must now appear as bald as
coots.

Don't, if you wed, expose your head,
Think what the jade, Dillah, did,
When, in his sleep, to get a peep
At Samson's bumps, she slyly slid,
To find, no doubt, the organ out
His weakness did consist in,
She shaved his head, and then betrayed
Him unto the Phillistine.

["There is many a truth spoken in jest."]

CREATION OF THE WORLD.—The questions of the origin of the world, the pre-Adamites, etc., have set the boys to thinking, and we are receiving "learned" dissertations from boys in their teens, who seem to think they know as much about them as their seniors. We give a single specimen from a Vermont fifteen-year-old, with his well-written note to the editor, as follows:

DEAR SIR: I take the liberty of sending you this. I hope I have been able to express the idea, though I am afraid not in the right language. I am only fifteen, and have had but few advantages. I am very much interested in this subject, and would be very glad if you would publish the idea if I have been able to give it.

I have seen in your JOURNAL, from time to time, several articles based on the first chapters of Genesis. Without attempting to say anything against them at present, I will proceed to give my idea, as derived from a careful study of those passages, but more particularly of the first few verses of the first chapter. Take the first verse: "In the beginning God created the heaven and the earth." "In the beginning," which all geologists agree must have been millions of ages ago, God made the world, i. e., created the matter contained in it; and subjected it to certain laws, for the matter at this time was without form and void. The attraction of gravitation would condense it into a globe, and its motion on its axis would produce the bulge at the equator. Gradually the crust cools, and then "darkness was upon the face of the deep." Now, the earth might have been in this state millions of years, the Bible says nothing to the contrary. All admit that it must have been so at a very remote period from the creation of man. Some make the difference in this: they consider that the first six days spoken of in the Bible

consisted of indefinitely long periods of time. Now, there is nothing in the Bible to warrant such a conclusion; nor are we to suppose that the earth revolved on its axis at any different rate than it does now. By reading the fourth, fifth, and eighth verses you will find that from morning to evening was considered a day. As this is the case, it is impossible to suppose otherwise than that only six common days elapsed from the time "God said let there be light" and the creation of man.

What a magnificent spectacle! as at the command of God the mists, which until this time have obscured the face of the earth, partially roll away, letting in the light of heaven. And God called the light *day*, and the darkness he called *night*; and the evening and the morning (*i. e.* from evening to morning) were the first day, as the first period of light. The sixth and seventh verses describe the lifting of the clouds from the face of the earth, which was now—the second day—entirely covered with water. The third day, at God's command, the waters gathered together and the dry land appeared. To do this three fourths of the crust of the earth must have fallen more or less below the common level, or one fourth may have risen. On this same day plants, herbs, and trees sprang up and grew as rapidly as the gourd of the prophet. During the fourth day the atmosphere became so clear that the stars could be seen at night, and the pale disk of the moon could be distinguished from the brightness of the sun. On the fifth day the monsters of the sea were created—every living thing that swims the ocean. On the sixth, beasts and creeping things; and lastly *man*. The earth was now fitted up for man, and on the seventh day God rested from the labor of fitting up the world he had created millions of years before. It is my belief, in short, that ages upon ages rolled by between the events chronicled in the first verse and those in the third.

[If these discussions lead to a more general reading and a better interpretation of the Scriptures, there will be a real gain in knowledge.]

"FAITH WORKS MIRACLES—you know." We submit the following from a correspondent as among the curious effects of mind on the body, which, it is said will "kill or cure," according to one's belief. Readers may form their own conclusions from the facts stated. Have we not Scriptural authority for the claim that "faith works miracles?" Here are the facts.

BELLEVUE, KANSAS. — MR. EDITOR—*Dear Sir*: In the December number, 1870, of the JOURNAL, if I mistake not, I noticed a statement of the effects of trimming nails on Friday as a preventive to toothache [simply a satire on superstition—Ed. A. P. J.]. Being subject to toothache, I had tried all else, but in vain, and resolved to test the virtue, if any there was, of trimming my nails on Friday. After a trial of three months I pronounced it a success, yet did not feel positive that trimming

the nails on Friday was the cure. In order to give the matter a fair trial, I trimmed my nails on Saturday morning, only to suffer a week with toothache. I had three decayed teeth in my mouth which appeared to work by instinct in taking turns to ache. For four months following I trimmed my nails on Friday, and found the result to be good. A desire to learn the cause prompted me to try Thursday evening for my nail-cutting, but the result was similar to the Saturday experiment. I am left in the dark. I wish you would explain the matter. Since then I have trimmed my nails on Friday, and the three teeth have entirely disappeared without the least pain. I would like to know what effect trimming nails can have on the body to cause so great a result. Is it trimming the nails on Friday or trimming them regularly that effects so great a change in the system? How are the teeth and nails connected so as to be affected by any physical treatment? Nothing can be of more importance to the aching dentals of humanity than so easy and effectual a remedy, if it acts similarly on all systems. An explanation would certainly be a mitigation to the aches.

S. T. B.

ACCORDING to an advertisement in the *London Spectator*, a nose-machine has been invented which, applied to the nose for an hour daily, so directs the soft cartilage of which the member consists, that an ill-formed nose is quickly shaped to perfection. [We guess not. The best nose-machine is a cultivated mind. It operates alike on white and black, rich and poor. Try it.—Ed. A. P. J.]

PHYSICIANS—PHRENOLOGY. — When subscribing for the SCIENCE OF HEALTH, L. P., writing from Boston, says:

"I believe in practicing a little common sense, such as is found in your journal, as a means of restoring and preserving health, instead of employing doctors; although, personally, I have no occasion to patronize physicians."

He adds, "I am a firm believer in PHRENOLOGY, and always have been since, when a boy, I heard a Phrenologist give a series of lectures; and believe a good one will tell a person's character at sight, better than ninety-nine in a hundred can after knowing them for years.

"Very truly yours, LEVI PARKER."

THE *Christian Standard*, of Cincinnati, Ohio, a very liberal organ of a denomination generally considered destructive in its tenets, thus alludes to the PHRENOLOGICAL JOURNAL:

"We have so often spoken of the character and aims of this journal that we need not repeat it. It is impossible that it should regularly visit every family without quickening the intellect of its readers, and waking up a spirit of investigation into the noblest studies that can engage human attention."

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

VOL. IV.—No. 2.]

August, 1872.

[WHOLE No. 403.]



HON. GEORGE I. POST.

THIS gentleman stands six feet high, weighs two hundred pounds, is well built, and has a large brain, which is upward of twenty-three inches in circumference, and high in proportion. The first impression one receives on meeting him is, that he is a power—not merely a Hercules in muscular strength,

though he is strong, but that he has strength of character and power of mind. He is mild, calm, considerate, but persevering and executive; he is firm, conscientious, hopeful, respectful, trusting, and believing—*i. e.*, he is not a skeptic, but is open to evidence, and free from prejudice, superstition, and

bigotry. His religion is liberal, and his prayer includes the race. He is kindly, sympathetic, and affectionate; is mirthful, playful, and joyous, though not hilarious, clownish, or boisterous. He is well-balanced, self-regulating, and dignified, not distant nor domineering. He has a fair flow of language, but is not loquacious. He talks ideas rather than words only, and what he says convinces. There is a crown to that head, and he is aspiring, not that he seeks notoriety, but that he desires to be successful that he may be the more useful. He would not build himself up on the ruin of another, but he would lift others up with himself. Destructiveness, Combativeness, Acquisitiveness, etc., are subordinate to intellect and the moral sentiments. If rich, he would share his wealth with the people, by promoting useful enterprises in which all could participate. If a teacher, preacher, or statesman, he would suggest measures for bettering the condition of all. If a captain, he would lead his followers on to intelligence, industry, temperance, prosperity, and peace. His motto would surely be "Upward and onward."

In personal appearance, Mr. Post is impressive. His features are full and prominent. The nose is slightly Roman, chin well formed, cheeks plump, eyes blue, and hair, originally dark brown, now a steel gray; skin clear, fine, and of a peachy hue. His habits being strictly temperate, he is generally the picture of health, and has great powers of endurance. We shall hear more of him in the near future.

Mr. Post was born at Fleming, Cayuga Co., N. Y., April 2d, 1828. His parentage is of a mixed character, combining the excellent and robust elements of the German, Scotch, and English, the first-mentioned predominating. His early education was obtained in the schools of his birth-place; and his later and concluding tuition at the Wesleyan Seminary of Lima. Shortly after leav-

ing school as a pupil, he returned as a teacher, being recommended for a position by those in charge of the public education.

By his father he had been intended for the profession of medicine; but young Post exhibited little taste for sick rooms, pills, and potions, looking rather toward the law as a more congenial sphere. So he prepared himself for the latter, and was admitted to the bar of this State in 1855. With good prospects, he commenced practice in Auburn, the county seat of Cayuga. Politics having a warm attraction for him, he availed himself of opportunities to take part in them; and as, at that time, the country was much exercised by the Slavery troubles on the Missouri and Kansas frontier, Mr. Post espoused the Free State cause, accepting the presidency of an organization, whose object was to aid the settlement of Kansas, then a Territory. For the promotion of this object, he visited that region, in company with the Hon. John J. Brinkerhoff.

On returning from the West, he gave his attention to the re-organization of the Lake Ontario, Auburn, and New York Railroad Company, afterward known as the Southern Central R.R. He continued to exercise his influence and interest in this behalf until the completion of the undertaking in December, 1871, when, on the 7th of that month, he, as vice-president, drove the golden spike at Fairhaven, and announced that the last rail was laid, and Lake Ontario made directly communicable with Auburn. The pleasant exercises which enlivened this inaugural incident were rendered deeply interesting for the vice-president by the fact that the citizens of Sterling presented him and his wife with elegant gold watches as tokens of appreciation for the untiring efforts he had made in behalf of the railroad.

Mr. Post was, for some time, a director in the new Lake Shore R.R.—a trunk line—now constructing between Oswego and Lewiston, on the Niagara River, to connect with the Great Western and the Pacific lines West, and with the Atlantic, *via* Hoosic Tunnel, etc., East.

The first office held by Mr. Post was that of Superintendent of Schools of Fleming, to which he was elected at the early age of twenty-one. In 1857 he was made Alderman

of the Third Ward of Auburn, and during the proceedings relating to the revision of the city charter, he was Chairman of the Common Council. In 1859 he was elected District Attorney of the County of Cayuga, and occupied the office three years, discharging the duties with satisfactory ability.

In the fall of 1862, he was elected a member of the New York Legislature, and from the outset was recognized as an active and efficient worker. During the proceedings which characterized the session of 1863, when the conduct of such members as Fields and Callicot drew upon them the censure of all lovers of good legislation, Mr. Post was found boldly asserting the rights and privileges of loyal and patriotic citizens, and denouncing those who, by their course, sustained misrule, disloyalty, and mob excitement. His speech on the cause of the war, arbitrary arrests, etc., which was delivered on the 3d of March, of the same year, was largely circulated, and very generally commended for its clearness, comprehensiveness, and practical dealing with the serious questions under consideration. On account of his prominent part in these days of trial, his character suffered much from aspersions cast upon it by political opponents. We copy from the *Tribune* of April 26, 1863, the following which shows the views of a writer, with reference to the character of the men composing the Legislature:

"It is in vain to deny that no Legislature, except possibly that of 1860, has won for itself so evil a reputation as that of 1863, and the curtain falls with criminal proceedings actually pending against one Assemblyman, and threatened against others. Certain it is that circumstances within the knowledge of every well-informed observer point with great distinctness to a number of members as having prostituted their votes and their official action in the most shameless manner; but let us hope that these cases are exceptional, and that the great body have been guilty only to the extent of casting their votes for measures of questionable character as the only means of obtaining support for bills which they regarded as of great utility and importance.

"Further and fuller disclosures on this subject will undoubtedly be forthcoming,

but it is at all events certain that this Legislature numbers among its members men of as eminent ability and as exalted character as any that ever held a seat in the councils of the State. It would be invidious to attempt to name all of them, but I cannot refrain from particular mention of Senators Folger, Pruyn, Bailey, Ganson, Low, Tobey, and Bell, and Assemblymen Depew, Saxton Smith, Cornell, Van Buren, Post, Weaver, Collins, Mayham, and Havens, as legislators who have been governed in all their public actions by the most enlightened intelligence and the nicest sense of duty."

Subsequent to his career in the Legislature, Mr. Post's attention has been given almost entirely to the railroad measures to which we have alluded. In 1865 he was appointed one of a committee of three to examine into the matter of location, grades and connections of the Southern Central R.R., the object entertained by the railroad men who had taken the subject in hand being to construct a railway line which should be the shortest and best route from Lake Ontario to the coal mines of Pennsylvania, and the cities of New York and Philadelphia, Baltimore, Washington, etc. The gentlemen associated with Mr. Post on this committee were John J. Taylor and C. S. Rich. The details of the report submitted are to be found in the "Memorial in behalf of the Southern Railroad," published in 1866.

Mr. Post has always showed a warm interest in religious affairs. In the early part of his career, as a lawyer, an incident occurred, which is somewhat amusing, on account of its unusual nature. A camp meeting, while in progress, was much disturbed by some disorderly persons, who were arrested shortly afterward, and tried for violating the law prohibiting such misdemeanors. Some of the accused engaged Mr. Post to defend them. Now it happened that just at this time Mr. Post was in the lists as a candidate for the District-Attorneyship of the County, and the trial of the camp-meeting disturbers took place on the day before the election. Mr. Post earnestly and efficiently advocated the cause of his clients; and this professional activity was made the pretext for an assault on his character and reputation, the object being to weaken his chances in the candidacy.

We have before us a document or circular, which was used at the election by his friends, and from it we extract the following :

"The undersigned members of the M. E. Church have learned, with deep regret, that an effort is being made to defeat the election of Geo. I. Post, Esq., the Republican candidate for District Attorney in this County, in consequence, as alleged, of his action as counsel in the late trial of parties charged with violating the law in respect to the disturbance of camp meetings. We are each of us anxious to uphold the law which protects these meetings, peculiar to the Methodist Church, yet we are ready to condemn, as pernicious and foolish, any and every attempt to make political capital against a fellow-citizen, because he may not entirely agree with us as to the best means to accomplish this result, or because he has been employed as counsel in opposition to our views, and especially, as in this case, where there is an honest difference of opinion as to whether the law has been actually violated. The day is far distant when the Methodist Church, through her ministry or membership, can afford to sacrifice her high character by descending to

such a level, or embarking in a political crusade against any man for such a cause. The undersigned, having been for years personally acquainted with Mr. Post, would bear willing testimony to his high character for honor, honesty, and humanity, and his liberal conduct toward the Methodist Church. While we would not impugn the *motives* of any who have engaged in this political movement, fraught, as we believe, with only evil and dishonor to the Church of our choice, we beg leave to suggest to brethren, that there is a better way to promote the interests of Methodism than to aid the enemies of freedom and morality, by diverting any part of the Republican vote to the support of a candidate, who holds no principles in common with us, either as Christian men or friends of freedom. We would not dictate, but we trust our brethren everywhere in the County will hesitate long before they allow themselves to be used, with however good intentions, for such base purposes."

This circular was signed by fourteen of the leading Methodists of the place. It is scarcely necessary for us to add that Mr. Post won the day.*

HOW THE DIFFERENT FACULTIES COMBINE—No. 6.

AS men mingle in society they find a marked difference, in many respects, between their own dispositions and those of their friends. No two seem to be alike; and although there may be harmonies brought about by the proper combination of differences, so that each is benefitted more or less by all, there are many points which bring us into unpleasant collisions. We find fault with each other, are tried and vexed by each other's ways, and there is more or less of censure and acrimony awakened between people thus differing in disposition. If one will look out upon the street where five or fifteen children are playing, what abruptness is exhibited in some, what impatient petulance in others, what sensitive solicitude in still others, what wranglings, hasty disagreements, and almost equally rapid reconciliations, may be seen in half an hour! In a populous city, if one sit at an open window

on a summer evening, and close his eyes and listen to the noises of the children, their sharp voices screaming, laughing, and contending, it seems as if bedlam itself were let loose. There is nothing so noisy as a flock of children, except it is a flock of birds—both seeming to find outlet of thought and emotion chiefly through the voice. If we would look at the children we would find that the legs and arms, that the running and jumping, tussling, rolling, and frolicking evince muscular activity quite equal to the vocal outflow of their nature; and the birds, too, are as active as the children.

But why all these contradictions in character and disposition among people? Why do children have so many squabbles for su-

* For the photograph from which the portrait was engraved we are indebted to Messrs. Ernberger & Ray, Practical Photographers, 83 Genesee Street, Auburn, N. Y., for whom Mr. Claudius is the operator.

periority, or for carrying out their purposes? The answer is simple, and yet most complex—simple as to principle, exceedingly complex as to detail.

CONTROLLING PEOPLE.

People who may be so denominated constitute a class, and their organization is peculiar to themselves. They are disposed to be master, to take the lead, to control themselves, and to control others; at least, to be master of their own doings and duties, and also to supervise and dictate to others. Go into any church, political party, commercial or manufacturing establishment, and you will find men classified, just as you will find boys and girls classified on the playground, with this difference in the manifestation only, that children act out impulsively and openly that which they desire and purpose, while in adult life there is more circumspection, guardedness, and wisdom in the manifestations of those faculties which make a man desire to control his own affairs and other people.

Let us describe the man, so that he who observes may readily read the character. If a measurement be made absolutely, or by the eye, from the opening of the ear upward and backward to the crown of the head, or by drawing a line perpendicularly from the opening of the ear to the top of the head, and another upward and backward a little behind the crown, if the length of the lines appears great, that person belongs to the class which likes to control. When the head is thus high at the crown, the man will be inclined to drive his own team, manage his own affairs, to do business without partners, unless the partners be juniors and subordinates.

We meet such heads in our daily professional practice, and almost always they say, in response to our description, "Yea, I must be my own master; I must have a business of my own; I cannot work for other people, unless I can work by the piece, so that I can be master of my own time." A printer who sets type by the thousand works when he pleases, and does not consider himself subjected to anything but the general rule of the office, to do his work as it ought to be done; but as to how much he shall do, and when he shall work or when he shall quit, he feels himself to be entirely his own master.

There are many trades which cannot be thus jobbed out, and he who follows them must, more or less, work by the day, week, or month, and, his time not being his own, he feels a constant responsibility to his employer for the filling up of his time.

Now, if a man have a high crown of head, large Firmness, Self-Esteem, Approbateness, Conscientiousness, and Cautiousness, he dislikes to work in such a way as to be under the personal control of another, and not be master of his own time and efforts. He is willing to be responsible for results, to warrant his work, and if it be done badly to take no pay, or half-pay, or do it over again. Hundreds of boys worry through a wearisome apprenticeship, chafed and fretted by this oversight of others, and as soon as they are out of their time they drop their trade for life, because they cannot work under others. If such a young man could endure the discomforts of his trade for a few years, while he could acquire a sufficient experience and capital to start for himself, he would be just the one to carry on a business and superintend others. He has just the right kind of a head for a "boss," is well adapted to carry on business in which he can be master; and he should, therefore, endure the irksomeness of control until he comes to the point where he can be free from it, and wisely exercise controlling power over others.

SUBMISSIVE PEOPLE.

As a contrast to those we have called "controlling people," the class now before us is worthy of consideration. Their heads droop in the region of the crown; they are short from the ear upward and backward—they lack Self-Esteem and Firmness, and sometimes Conscientiousness; they generally have large Cautiousness, and frequently not very large Combativeness and Destructiveness. They learn to depend on others, and fail to take an independent stand in anything. They are distrustful of themselves, undervalue their capabilities, and are afraid of making mistakes. They dislike to put the shears into the cloth, but will cut out a pattern of paper and try to fit it on, if it is dress-making that they are doing, and then cut the lining and baste it, and afterward cut the silk or the other substance constituting the pattern. One of the former class, on the

contrary, will boldly cut right into the goods, finish the preparation of the work, and do it well, while the other would be guardedly cutting the paper pattern.

These submissive people never take responsibility; they wait for others, and are exactly adapted to be under the supervision and controlling advice of one of the high-headed, high-crowned sort.

It may seem strange to the reader that we advise one of these persons weak in the crown to marry one, or go into business with one, having the crown high. In such a case the submissive person gets a brave, self-confident leader. Each supplements the other, and the two together work harmoniously and secure success. It often is the case that the brave, self-confident man needs a timid, anxious person associated with him to act as a brake to moderate his speed and regulate his force. If we put two headstrong people together, it is not pleasant for either. If we put two that are lacking in force and will-power together, they stand in the selfish world like two sheep in a wolf-den, afraid to act, and so amount to little.

A submissive man may have talent, and only need that somebody shall take the responsibility and lead off.

RASH, OUTSPOKEN PEOPLE.

These have a peculiar organization; their temperament is active, and their developments positive. They are known, generally, for rather large Combativeness. They are pretty full just about the ears, but the head tapers up toward Firmness, which is located in the middle of the top of the head, just forward of the crown. They have moderate Cautiousness; their head is narrow at that region, and rather small below at Secretiveness. They are brave, dashing, independent, incautious; they talk loudly and very freely, expressing more than they ought; they use terms which are too plain and abrupt, and frequently give offence by their positiveness and bluntness of expression, and are always getting into "hot water." People learn to be afraid of them; are not open and frank in their presence, lest they should carry and scatter through the whole neighborhood all they hear. People never confide anything to them that they wish to have kept from the public; and such persons are very apt to ex-

aggerate. With them it is "a dozen," "fifty," "a hundred;" they rarely say "several persons" or "some persons" say this or that, it is "everybody says it."

CONSERVATIVE, PRUDENT PEOPLE.

These have a more equable temperament than the former, and have a better control of their characteristics and dispositions. They are large in Caution and Secretiveness, well developed in Firmness and Conscientiousness, generally have pretty good Causality, the upper portion of the forehead being rather large, and they have not Language enough to produce a restless desire for expression and utterance. Such persons, if questioned on a subject, never state all they know about it at once. If they are in Court, under oath, their utterance comes like the thread from a tangled skein of yarn; they show hesitancy, guardedness, and indisposition to express freely the knowledge possessed, and the lawyers have to put leading questions to find out what the witness knows; not that he is dishonest, or fails to recognize his oath to tell "the truth, the whole truth, and nothing but the truth," but he thinks he must consider whether that which he is expected to state can be in some way modified, and if he cannot think of some more general and prudent form of expression than to "blurt" it right out, as the lawyers expect him to do. If such persons be asked a question by a friend, this is a very common reply, "I don't know. Why?" They want to know what will be the effect of the answer before the answer is given. They look on all sides with circumspection, and weigh their answers; they never get entangled in their talk—never make enemies with their tongue, or mar their cause by "too much speaking." They sometimes annoy and provoke their friends by being non-committal, suspiciously hiding common matters as if honor and life depended on their concealment.

AN artist who ignores Phrenology and Physiognomy cannot be successful. He may make a tolerable copy of inanimate objects, but if he would give life, action, and spirit to his production, he must understand the nature of the object depicted.

Department of Religion and Psychology.

Know,

Without or star, or angel, for their guide,
Who worships God shall find him.—*Young's Night Thoughts.*

The soul, the mother of deep fears, of high hopes infinite;
Of glorious dreams, mysterious tears, of sleepless inner sight.—*Mrs. Hemans.*

GLIMPSES OF THE INVISIBLE.

THE story of the development of man's faculties, like the history of the formation of the crust of earth, is a narration of the working of unseen forces continuously pushing upward the weakest points until exhaustion of material produces thinness at another spot, and mountains and valleys are formed. The unseen spirit acts in the same way upon the brain of man, and hence the truth of Phrenology. The law of the resolution of forces displays itself in the individual cranium, by taking away from all the rest of the faculties their respective portions of any excess of exhibition in a particular direction. In the grand man or humanity, who lives and learns perpetually, this law exhibits itself as plainly. The unfolding of the soul or mind of the race is wrought out in a series of polar reactions.

Nowhere is this more thoroughly evidenced than in what may be called the law of spiritual evolution, by means of which the organ of Veneration, the highest pole of the brain, reaches its ultimate, ideal terminus in a pure Christianity, the extreme rational opposite of which is the Positivism of Auguste Comte, who may be taken as the type of the culmination of that modern scientific materialism which concludes that all worship and belief in the unseen is delusion, and that only the outward is worth studying. This school of thought has now many adherents among those who, phrenologically, lack the organs of Spirituality, and are predominantly expanded in the perceptive regions.

Comte himself, toward the latter part of his life, discovered his error, and sought, under the influence of a female friend, to cultivate that more properly feminine or receptive or enthusiastic energy, which, none knows better than the philosophical phrenologist, is the outcropping and visible indication of the immortal spirit.

This law of balance and vibration, so well known to the student of the morphology of mind as it is expressed in the cranium, is constantly manifested in the history of materialism and the individual materialist. The preacher tells the truth when he says that faith reasserts its power over negation on the death-bed of the most determined skeptic. The approach to another life, the belief in which is a fact deeply impressed in the universal consciousness, awakens those organs of the mind which are the media of spiritual vision and insight, and weakens, at the same time, the intense self-sufficiency of reason, which would deny all that it cannot apprehend.

This same sublime law of spiritual evolution is the most marked intervention of Providence in the *grandis ordo eventuum*, the grand procession of events, which makes history. Of this the most wondrous exemplification is in the fact that the Christian revelation, whereby man's life after death and his infinite responsibility are established, grew out of and was, as it were, the rebound from the intense materialism of the age of its advent, of which the poem of Lucretius, *De Rerum Natura*, may be considered the most finished exponent.

Have we not had a similar phenomenon in this century; the inevitable protest of the spirituality of man's nature against the sheer and hopeless materialism of modern science, of which Comte may be accepted as the most thorough representative? The mere material exhibition of this has been in the somewhat questionable occurrences of modern spiritism—a revival and reappearance, as it would seem, of the old demons whom, it was supposed, science had laid forever. The wonderful spread of this belief in spirits is synchronal, or simultaneous with the modern advance in material science by which, accord-

ing to Comte, the supernatural and metaphysical, or infantile stages of the human mind, end in the Positive. But Comte forgot that this law of Trigrade development, having completed its evolution, takes up again the old materials, and that Positivism having reached its ultimate speculative position, Spiritualism intervenes and demands the exercise of its corresponding mental faculties. This is an anthropological law indicated, as I have intimated, in the history of the race and of the typical individual. All great material thinkers in whom the spiritual perceptions were not entirely subordinate to the perceptive faculties, have undergone this experience. Newton and Sir Humphry Davy were both profoundly metaphysical; and the exalted soul of the former, having solved the problem of the outward universe, lost itself in speculations upon the infinite.

The position of ultra-material scientists at this day is expressed in Büchner's book on "Force and Matter;" these two, according to him, being the elements of all things—the force, in all its manifestations, the blind product of the development of matter!

The present position of the Church is either a credulous supernaturalism or sacerdotism, or else a rational disposition to accept science, retaining faith in the elementary principles of Revelation and the Church, looking at these last as broad and general statements addressed to the intuitions, the heart, and the conscience, and not intended to have such scientific validity of detail as to submit to the process of cold, mathematical analysis.

Just at this period the spiritual world makes itself known to the material, in a series of occurrences so strictly analogous to all similar exhibitions so frequently made to mankind, that a law is evident to the observing and unprejudiced thinker.

To the considerate Christian, who has carefully and prayerfully observed these phenomena from the stand-point of his own spiritual education, their frequent absurdity and deception prove their relation to all the spiritual incidents of the past; while they are to him, at the same time, the fulfillment of prophecy, an eruption of the same hidden, invisible forces which were made use of by the Infinite Father in the establishment of the

revelation of Christianity. When the Church shall accept and take charge of them, these restless and uncertain ghosts will fulfill their mission, and by positive proof of their existence settle definitively and scientifically the question of immortality and the truth of Revelation.

Is there not here, when it is properly considered, as much evidence of an immediate and miraculous providential intervention in the affairs of men, for the preservation and purgation of the true Church of Christ, as there was in its foundation? The Church of the future will so regard it. Science had terminated in materialism, and the most thinking people of the world, the inhabitants of this country, were, many of them, rapidly verging toward the blankest atheism, when, of a sudden, the gates of the invisible world are again unclosed, and the "open vision" of the Hebrew prophet is revived in the mediumship of the nineteenth century, by means of which, in twenty years, millions of intelligent people became convinced of the immediate intervention of spirits in the affairs of mortals.

These modern phenomena, when their whole history is carefully considered, are seen to be sufficiently analogous to those that accompanied the Christian revelation to prove that both are products of one law; but these latter-day intimations from the spirit-world are personal or individual, and comparatively common-place, and not, as in the founding of Christianity, referring solely to the Infinite Head of the Church. They are hadæan, not celestial. They appeal to the scientific mind, and not to the religious. Through them are expressed merely the floating opinions of spirits. The deeper mystery of being is yet, as ever, in the charge of the Church.

This much, however, they do accomplish toward establishing, scientifically and positively, the law of immortality and the truth of Revelation. By the strict rule of evidence that "invariableness of phenomena under similar conditions" proves their truth, they establish the existence of spirits, and their occasional power to torment, perplex, and, under the proper conditions, to inspire mortals.

No more succinct statement of the whole nature of spiritual phenomena can be found

than is contained in the many general references to them in various parts of the Holy Scriptures; and the injunction to beware of them is as important in this age of disbelief in their existence as it was when it was uttered.

Considering, then, Christianity as the highest of truths, and modern spiritual phenomena as outbreaks of the psychic force of nature by which God controls the universe, an entirely new science of psychology lies open to our study.

J. WEST NEVINS.

EFFECTS OF THE MIND ON THE BODY.

MEDICAL works contain many curious facts in regard to the power of the mind on the conditions of the body. It is shown that the mind may kill and that it may cure. Readers have heard of cases where, through intense fear, the hair had turned gray in a night. A criminal under sentence of death was told by his keeper that it would lessen the pains and agonies of dying to be bled, and permission having been obtained from the authorities by physicians to experiment on the convict, the day appointed for his execution was set for their experiments. The man was informed that, instead of hanging, he would be bled to death, and the dreadful prospect may very properly be supposed to have penetrated his soul. When the time arrived, preparations were commenced as for the execution. Buckets were brought, as if to hold the blood, and surgical instruments were exhibited to the gaze of the wretched man. Being assured there would be no great pain connected with the opening of a vein or artery, and that he would die gradually and without a struggle, he was stretched on a table and an arm made bare. A watch was placed so near that he could hear it tick, and he was informed that in so many minutes after applying the lancet he would cease to breathe. His eyes were then tightly bandaged, the buckets set in position, and the lancet—no, the lancet was *not* applied, though the skin was slightly pricked and a little stream of warm water was permitted to trickle through a straw over his arm into the bucket. He soon began to grow faint. The surgeon notified him of the expiration of the first five minutes, holding the watch still nearer his ear, while the warm water continued to trickle down the arm into the bucket below. To make a long story short, we may state that the culprit died almost at

the moment set by the physicians and surgeons, without losing a single drop of blood, and without any hurt, save through the imagination or mind.

Another. Two convicts, also under sentence of death, were told that they must occupy apartments in the prison in which two culprits had just died of yellow fever, and that the probabilities were they, too, would die before morning. There had been no such deaths from yellow fever, nor from any other epidemic, but the poor, frightened fellows gave up the ghost, as predicted, before the morning.

Any number of similar cases have been described. There is no end to the "wonderful cures" effected by bran-bread pills, colored water, etc., in which the only potent agent was that of the mind. The mind kills and it cures. Hopefulness, cheerfulness, courage, a clear conscience, honesty, and *faith* will work miracles almost in the way of restoring lost vitality and lost health.

Here are paragraphs from *Hearth and Home* on the "Mind Cure," which are in point: The finest curative agency in the world is the mind of the patient. We do not mean to say that you can cure corns and bunions by resolving to dispense with them, or that you can restore your lungs after disease has destroyed them by having a cheerful temper, or that a cancer can be eradicated by a hopeful heart. The "Mind Cure" is not warranted to act as a specific for everything. But there is no medicine that is susceptible of such a variety of uses as this. There is no disease in which the state of the mind has not much to do with the state of the body.

Physicians prescribe travel and sanitarium; they send one man to Minnesota and another to Florida, without taking the temperament of the man into account. We have seen a man, acting as chief of police in St. Paul,

who had been carried ashore from the steam-boat on stretchers, so far was he reduced by hemorrhages. Climate? Yes, and more than climate. Doubtless the man was of a hearty temperament, and enjoyed the new and strange scenes about him. We have seen a hundred invalids in the same climate pine for home and older civilization, and die of nostalgia. Let it be understood that no invalid is benefitted by a climate when he stays in a place an hour after that stay is enjoyable. If you are an invalid, arrange your life so that it may be restful and happy to you, and then enjoy it. We recall a man, a bridge builder, who carried his consumption over bleak and snowy prairies, who slept in cold beds in frontier taverns, coughing all night, who built bridges and drove business when his lungs were wasted away. He said that he was happy at work, and that work kept him alive. And it did. Year after year he managed to spin out his broken life, happy always, and making all about him happy, until he became a walking miracle. At last came the catastrophe, and he died. If your business amuses you, and you are succeeding, and you can keep your temper happy, then there is no better medicine.

But he who has a distasteful business, and who has not the will or power to adapt himself to it, is indeed to be pitied.

Life insurance companies thump your ribs and listen to the whispers of your heart. They ask about your father and your grandfather and your mother's sister and grandfather's brother. They want to know whether you have had any or all of the following diseases, etc. But when did a life insurance company ever think to ask about your clear conscience, your cheerful heart, your business success, your amiable domestic relations, your religious faith, and all the rest that go to make sunshine or clouds in your life?

Do not listen to anybody who tells you to travel if travel is uncongenial to your temper. But if you enjoy it, then travel is the best of all medicines. An invalid struggling for life should not have any duties. The main business at such a time is to enjoy yourself. Joy is a tonic above all.

[More faith and less drugs; more sunshine in the open air, and less confinement in badly-ventilated rooms; more resignation to the *inevitable*, will prove far more curative than pills, plasters, bitters, and the whole paraphernalia of the pharmacopœa.]

Department of Our Social Relations.

Domestic happiness, thou only liest
(W) perdition that has survived the fall!
Thou art the nurse of virtue.

SOCIAL SCIENCE; OR, WHAT DO WE MEAN BY LOVE?

MUCH is thought, spoken, and written concerning the social dangers of society at large; and there seem to be many within the great circle of humanity subject to general impeachment of misdemeanor or high crime. It is not herein intended to specify how many, and who are the guilty; but, from various good causes, we suspect a majority of those under impeachment need not only the tenderest pity, but also the most persistent effort, on the part of responsible, thinking individuals, to help in extricating them from the merciless, unrelenting determination of the orthodoxy of society to banish from its presence all who dare to step a single hair's-

breadth outside of the old landmarks of respectability.

Every clique has its common circumference, but different societies have their particular marginal lines of propriety—their one strict code of morals; and that which unto one is a divine law, to another is a direct departure from all law, and a forfeiture of its protection. Who has the right to fix the limits of personal responsibility? we ask; and each fluttering leaf of society, each little branch of the church, with equal pretensions of superiority, claims the privilege—or employing the more impressive word—the *duty* of expounding the law, the length and breadth of its possibil-

ities and practicabilities, its elaborate beauty, and its intricate philosophy. We have no fault to find with any special society which promulgates a doctrine for the morals or spiritual beliefs of a needy community; and we claim, upon the same principle of freedom, an equal right to reject one and all of the popular theories and philosophies when they are not consonant with our organic structure, which, of necessity, reasons and casts reflections in harmony with its general nature. We know that some of our noblest men, some of our purest women, are tyrannized over, fettered with foul suspicion, and chained to ancient laws, the toleration of which is creditable to present intelligence only in the educative capacity of historic relics of barbarism. We are to-day slaying our thousands for attempting to hold opinions born unto them of nature's necessities, which are sacred to them, and for daring to live in accordance with those opinions.

Is it wise to suppose that there is no one so good, so intelligent as ourself, to the extent that we must convert everybody to our pet ideas, our peculiar tastes and habits, and to our idiosyncrasies? We are created as unlike in character and thought as we are in physiological structure; and there is a poor prospect of an assimilation that will destroy individual identification. These differences are the essential, creative forces. Nothing is good, nothing bad, except by comparison. Each condition of life, however objectionable, because it is beneath our moral or intellectual intelligence, is still a means of growth to him who attempts its use. Personally, we may not have scaled just such a ladder to reach our moral height, but it is no cause of exultation. We were only conditionally born of parents who, anticipating our probable inefficiency of character, were kind enough to carry us up in their arms to where they could leave us in comparative safety.

Where is the cause of such fierce contention between the advocates and opposers of free-loveism, except it be a misunderstanding of the principles and tendencies of love? We hear some remarkable and many unphilosophical definitions of love. A friend says: "It is a desire to be petted and caressed, or, in other words, a leaning upon another's disinterested interest, or unselfish love." We

like the explanation, not because it is satisfactory as such, but because we can see in it the popular understanding of the love element, and the direction of its growth. She would say: "To love is a desire to be loved." Here self-interest seems to be the conspicuous idea. This is a certain quality of love, but not the quality that we are desirous of winning—not the love we would receive. Is it the best we have to give? Then we find those creatures in human form a few removes from the brute, who are scarcely capable of any affectional qualities—who acknowledge no emotions of love. The little spark they possess is a base, undignified element—the simple outgrowth of selfishness; and it is all they can comprehend. What do they know of that love which is above self-sacrifice, inasmuch as it is too pure, too hallowed to be conscious of a selfish, separate existence from itself, losing nothing of beauty, nothing of love by its constant outpouring, because a continual stream flows in? It is all love, all beauty, all treasure. There is naught to conceal, naught to make ashamed, naught to despise.

Common humanity says of the first: "It is beastly, degraded, and contemptible." Of the other extreme: "It is beautiful in theory, but impossible in practice." So they are constantly vacillating betwixt the two in theory and practice. We assert that whatever is really beautiful in theory can always be made possible and practicable. If unto us was given an attribute of love, or beauty, or genius, it was bestowed for a noble purpose—it was given for the practical life, and that which is not attainable lies beyond the mind's conception. We have read but a few pages beyond the alphabet in the great book of possibilities; but we shall yet learn that whosoever has one little spark of love, be it ever so low, he shall be able to fly with it up to the infinite God. Shall we wage war with him because he chooses his own course of migration? We have the right to an opinion, providing it is virtually our own. We have no right to assail any individual, or body of individuals, upon an element of their character, with promiscuous opinions gathered here and there, but which we have neither time, inclination, nor ability to weigh. It is not simply thoughtless to lavish baneful epi-

thets upon those whose social lives range wide of the common routine, as it is now practiced, it is worthy of a classification with those criminal offenses which our legal sensationists are vainly attempting to cancel by capital punishment. What does the animal man or woman know of that holy, spiritual love, so pure that it reaches out to all, scarcely thinking of sex, knowing absolutely nothing of the degraded ideas that ignorance and lust can entertain of its noble freedom? Shall we allow animal instinct to dictate the limitations of educated reason? Not until we can pluck out our own eyes, and give them to our blind brother, making him to see life with them, as we now behold it; not until we disavow the laws of science; not until annihilation defies omnipotence with a reasonable hope of victory. Let those who oppose free-love be very careful that they do not, in their estimate, draw love down to the baser quality of lust. Let them remember that love has a different significance—a different meaning to different minds.

Have we the wherewith to test the quality of love that maketh us to do as we sometimes unwisely do? Is there not a conviction to our individual minds that we have been, at times, prompted by unknown power or force to do the exact things we would not have done for worlds could we have spoken, or left unspoken, the very words that held our destiny; when we felt the responsibility that we must do just the right thing, and speak precisely the word at the right moment, and still the hands refused to move, the lips to utter the word? And how has it been with us? Are we mourning in sackcloth and ashes? Not a bit of it. We say we did what we could. There was an over-ruling providence wiser than our thought, our purpose, or our cautious propriety; and God, knowing all, will be merciful. But if merciful to us, why not to others? to those whom we impeach? Oh, the few brave, loving spirits of humanity who dare to be true to that divine love which God established in their natures—who are able to love that which is worthy of love, wheresoever they find it—dare to love in broad daylight, and feel no shame that the multitude shall know it! These are above our reproach—above our gross suspicion. Many a Christian woman

sees God in the clerical robes of the priest who baptized her, or hears Him in the few friendly words of cheer spoken at the close of service. The maiden worships God in the man who loves another, clings to her love through life, and we respect her for it. Many a man finds divinity in the sweet face of a woman who is not, and never will be, his wife. She seems the embodiment of purity; he thinks of her with holy emotions of love; sees God in her beautiful face.

Is the Christian woman all wrong? Is the maiden? Is the man a blasphemer? None of these will ever suspect they have committed a crime, or cherished an unholy passion, until public sentiment whispers the thought. They have found the little of God they can appreciate; found it in His works; they will go "from nature up to nature's God." Love is the divine essence or quintessence of all things holy; and there is nothing evil in it. Then, why is it wrong to love a thousand men and a thousand women all at once, providing our hearts are sufficiently large to take in that little of a great humanity? We hear the answer: "Humanity is too sinful, too weak to be trusted with the freedom of love." That was a thought of lust.

Humanity will always be weak, always be sinful, so long as we have no faith in it. Take two boys to rear up to manhood; manage one by telling him he is good for nothing; and let the other boy manage himself, by telling him he is capable of it; and see how truly both prophecies will be fulfilled. Just as long as humanity has no faith in itself, just so long will it doubt the efficacy of truth and honesty; just so long will it employ falsehood and deception, of all colors and shades, to keep appearances respectable; just so long will appearances be held more rigidly or religiously than realities; just so long will religion be a myth, and love a lust; and just so long will the immortal soul be held in subordination to the lower instincts of flesh and blood.

Our highest intelligence teaches us that truth will bear its weight; that right must and shall prevail. If this be true, who can afford to tamper with appearances, at the cost of immediate certainties? One of Christ's disciples denied him; but did the denial change the true condition? We find those who hide

their sins under the surplice of the priest, or under the good principles of some popular institution. The priest's surplice is not to be condemned because a sin has stealthily crept under its folds; the hypocrite cannot damage the genuine purity of the institution. Principles rest on their own merits. Our marriage relations are violated at the outset; the sham is not worth protection.

Let us have genuine love marriages, and we cannot touch their sacred bonds with pollution. "Shall we sever family ties? Shall we separate father and mother from sons and daughters?" No; society every day advocating principles that lead thereto, they are already separated and separating, in spirit and in truth. There is bickering and strife between sons and daughters, between children and parents, because children were born of marriage that was never hallowed by love. The wrong must stop somewhere. The complications are growing greater and more dangerous.

Instead of hurling anathemas at the heads of those unfortunates who, disgusted and heart-sick at the pretentious shams of social laws, are trying to become a law unto themselves, whose necessities the orthodoxy of society has never attempted to provide for, let us begin to acknowledge truth wherever we find it; and let us find moral courage to present it to the young. Let us set aside the indecencies of our false modesty, and be true to that nobleness of character with which our natures are endowed; and with a bold stroke of reasonable modesty, let us wipe out the imaginary line that ignorance has tried to establish between the sexes, so that mind can hereafter communicate with mind, whether masculine or feminine, and, as the children of God, we can go up together to the higher life that awaits us. Here is a tree that produces miserable crab apples: are the apples to be censured because they are not the best quality of cultivated fruit?

Carry the blame farther back to the tree that produced the fruit, and the tree will reply: "It is his fault who planted the seed of which I was born." Go back to him who planted the seed, and he will tell you he thought it was good seed; or it was the best he had, and better than none. Now, we believe the highest intelligence is capable of

the noblest duties, and, therefore, responsible for the results of its labors; and if man has intelligence, it is his duty to use the best means to the noblest ends. If he cultivates a fruit orchard, it is his duty, privilege, and profit to procure the best varieties of fruit trees. So is it with the social tree. Marriage must be based upon the conditions that will produce harmony, or it is dissonance and discord, misery and crime, disease and death.

Society and church should proclaim the evils of marrying where love is not reciprocal. We should go still farther back and employ the means within our reach, whereby we may set our affections upon worthier objects. We should learn to *know ourselves*, and know each other. It will not require half the study, half the intelligence we now make poor use of, trying to compel our old-fashioned, defective machinery of social law to weave a web of perfect happiness. If we condemn any, let it be those who doubt the safety of reason—those who believe appearances are real and realities shadows. When we educate children and youth to be self-reliant in thought, bold and earnest in truthfulness, let us educate them to pecuniary self-maintenance, and to the fact of that materialism in the mechanism of the mind which requires scientific laws similar to those found in the chemistry of matter, there will be no need of marrying for a home, or for the influence of wealth; there will be no calling for divorce laws; no need of Magdalene asylums; no free-love institutions; nothing for restraint but the freedom of healthful intelligence.

ROSINE KNIGHT.

TALKING.

WE have a profound respect for people who talk sensibly and well—people who are certain that they have something to say, and then express themselves in so ready and brief a manner as to excite our admiration and command our respect. But there seems to be some difficulty in attaining a proper medium between a fluency of speech, which is apt to lead to an excessive and tiresome copiousness, or that languor and difficulty of expression which causes those of quick and busy ideas to shun, as they would the plague, persons afflicted therewith. The

former fault is generally the accompaniment of youth, the latter, that of age. There is no doubt that all such peculiarities are, in a



great measure, involuntary, depending on the talents and character of individuals; and that they are susceptible of correction cannot be denied.

The gift of speech is one of the distinguishing endowments of man, and one of his most important duties is its regulation. To man alone is given this wonderful faculty. Yet, like every other gift, it is capable of being misused; and when abused, it is characterized in scripture, as being in itself a "world of iniquity." "Words," says a celebrated writer, "are the only things that never perish—words endure while kingdoms vanish and generations pass away."

There is a great deal of vain, thoughtless, useless conversation, yielding no possible good to the speaker or hearer, and it is dangerous for us to accustom ourselves to such conversation; for it will certainly exert a very pernicious influence on the mind. There is also a great deal of censorious talking, and this is a still worse example of the abuse of speech. An evil speech uttered against a young man may affect all his relations in life; may destroy friendships in which his affections and his hopes were centered, and cool the love of the nearest and dearest he has known on earth.

It should be the aim of all, and especially of the young, to guard against vain, thoughtless, useless conversation; against slander and meddling with the affairs of others. We should endeavor to make our conversation at all times cheerful, pleasant and profitable, and to do this we have only to deal in that which St. Paul mentions as "Sound speech that cannot be condemned." W. A. P.

ASLEEP ON THE BEACH.

BY GEORGE H. PROCTER.

There's a dear little child at play
On the beach, with its pebbly shore;
Bright and joyous the summer's day,
And hushed the sound of ocean's roar.

The tiny waves dance up and down,
Sparkling and rippling merrily;
The child with play hath tired grown,
And lain him down quite wearily.

Higher and higher up they creep,
Those rippling wavelets tipped with white,
Off from the bosom of the deep,
Along the sand they take their flight.

In they keep rolling with the tide;
The boy sleeps on—so free from care;
O'er the waters the light winds glide,
And sunbeams kiss his golden hair.



Old grandpa, who can scarcely creep,
With palsied limbs—voice feeble, too,
Sees from his door the child asleep;
Great God! what is there he can do?

With quivering lips, uplifted hands,
He prays, midst sighs and weeping,
That the good Lord from off the sand
Would save the child there sleeping.

"Descend, oh, Father, from the skies,
And touch with spirit of light
My little grandchild's sleeping eyes,
Or stay the proud waves' might!"

His prayer is ended,—he has done
All that he can to save the boy,
And left him in the care of One
Mighty to save or to destroy.

Hush! what does the old man see
Skipping along o'er the pebbly ground?
Bruno, his dog, who, leaping free,
His master joins with a joyous bound.

"Bruno, good dog! there's Charlie dear,
Your playmate, lying on the shore;
Go quickly, now, and bring him here,
Ere rising waters sweep him o'er!"

Showing the dog an old toy gun,
Which oft he'd seen in Charlie's hands,—
He knew at once, and off he run,
Bounding across the glistening sands.

The child is reached. Haste, Bruno, haste!
There may not need another wave;
The waters rise—Oh, do not waste
A moment more if life you'd save!

Brave dog! gifted with instincts rare,
How gently you lift that little walf
Out from the surf, and with such care
Place him above, where all is safe!

* * * * *
The mother came with bated breath;
How she had run from grandpa's side!
She feared her boy had met his death,
There on the sand, amid the tide.

But when she saw his opening eyes,
And pressed his tiny heaving chest,
Oh, joy untold! what glad surprise!
Ecstatic rapture filled her breast.

"HAVE YOU A CHARACTER?"

BY ALTON CHESWICKE.

IN an amusing little play which we witnessed some time ago, but of which we have forgotten the title, the hero, "Paddy Miles," is asked, as a preliminary to engaging his services, if he has a "character," to which he replies with an air of great confidence, at the same time industriously searching the numerous and intricate receptacles of his somewhat dilapidated attire, "A character? av coorse I have a character—to be sure I have, *ivery man has a character!*" He ends by producing the needful document which proves to be in his favor.

We laughed heartily at the excellent rendering of this amusing little incident, and it was recalled to our mind by an event, almost as amusing, which took place quite recently within our own experience. Our family finding it advisable to dispense with the services of an excellent domestic, a situation was procured for her in an adjoining neighborhood through the assistance of a friend. She was duly provided with the necessary testimonial of good conduct; and gratified at the recommendation she had earned, and having moreover the prospect of an increase of wages, she set out for her new home quite jubilant. About half an hour later, as I was upon the point of leaving the house, she returned, pale and breathless, and addressing herself to me as the first person she met, gasped out—"Oh, sur, I've lost me character!"

"I hope not," I replied, somewhat taken aback at the startling announcement.

"Oh, indade an' I have, sur," she persisted, "I put it all safe in me pocket before I lift the house; an' I'm sure I had it only five minutes afore I missed it, but some one must have tuk it out of me pocket. An' now, shure, they won't have a word to say to me if I've no character to show fur meself."

With an involuntary smile at the idea of a *character* being held at so slight a tenure, and wondering, withal, how many lost characters could be so easily regained, I proceeded to rectify the mishap by furnishing a duplicate, and in as grave a manner as I could assume, I observed, "But you should carry your *character* in a safer place than your pocket, my good girl."

"An' where shall I carry it, sur?" was her anxious query as she received the precious document from my hands; and as I made no reply, she continued, "Faith! I'll not let it lave me hand till I'm done wid it," and having obtained my nod of approval, she went on her way rejoicing.

We were soon *en route* for our place of business, now enjoying a hearty laugh, now engaged in deep and serious thought, as the humorous or philosophic side of the affair just passed presented itself to our mind. "This girl," we thought, "sets great value upon the

document she calls her 'character,' although it is but the shadow of what her actual character itself is the substance. I wonder if she will evince half the care and anxiety in the preservation of the genuine article that she has shown for that which temporarily represents it. If she does she will be unlike the world at large, wherein the majority prefer to seem, rather than to be. Paddy Miles was right when he said that 'ivery man has a character,' but he does not carry it in his pocket only—should not, at least—and once lost, it is doubtful if it is ever fairly regained."

Arrived at our office, the cares of business soon drove the little occurrence, with all its attendant fancies, from our mind; but it was not long permitted to remain forgotten. A stranger entered and desired to be informed with reference to the general character and abilities of an intimate friend of ours who had applied for a responsible position in this gentleman's employ, and had referred to us. Perhaps there could have been no duty assigned to us at that moment that would have been more agreeable, or upon which we would have entered more willingly than upon this. We had known the gentleman for nearly three years, and he possessed our utmost confidence and esteem. In the few business transactions we had had with him, we found him prompt, able, and reliable; while as a friend he had shared our confidence, respected our prejudices, humored our fancies, and flattered our vanity; while his readiness to oblige, the sentiments he uttered, and the principles by which he seemed to be actuated, were such, that though possessed of some peculiarities, disagreeable and offensive to many, which made him not a few enemies, yet, in our estimation, his virtues so far outweighed his defects, as greatly to endear him to us. It is true that upon our first acquaintance we were struck by the peculiar conformation of his head, which, while denoting talent, did not, phrenologically considered, evidence the existence of the noble qualities he professed; but our interest having been awakened from the first by the dignity and patience with which he endured the spite and contumely of his many enemies who, after all, seemed to have nothing positive to allege against him, and continued intimacy confirming our most charitable judgment in the matter, we came to the conclusion that the rules of Phrenology, like every other rule with which we are acquainted, had their exceptions; and having fully made up our mind that he *was* an exception, the apparent incongruity ceased to trouble us, and

we thought no more about it. Entertaining this opinion of him, founded upon our own experience, we were not only ready but anxious for the opportunity of saying a good word in his behalf; and so excellent was the character that we gave him, and so earnestly did we recommend him, that the gentleman left us fully determined to close with his offer at once.

"So," we thought when we were once more alone, and the little incident of the morning recurred to us in connection with the kindly office we had just been performing for our friend, "it seems that a 'character' is a very convenient thing to have about one after all, and that 'ivery man' should indeed possess one in order to insure success in life. We are getting into business, it seems. By the way, it is time we were looking up a 'character' for ourself. We cannot, to our knowledge, at this moment, lay our hand upon a single document bearing evidence in the case one way or another. What sort of a character, we wonder, could we obtain at short notice, and to whom of our various friends and acquaintances should we best apply? Really, we must take the matter into consideration." Our thoughts rambled on in this half-serious vein for a few moments, and then, thoroughly gratified at the result of the day's effort in behalf of our friend, we returned to business matters, and were soon immersed as before.

On our way home that evening, we recollected an appointment which we had made, but had nearly forgotten, with a gentleman whose house lay on our road; and as it was still early enough for the purpose, we bent our steps in that direction. While waiting in the library for the gentleman, who had not yet got home, his wife entered, and after the usual salutations, addressed as with the unexpected query—"You are considerable of a phrenologist, Mr. C—?"

We confessed to a good deal of interest in the science, and acknowledged a slight degree of acquaintance with it, but begged the abatement of the term "considerable."

"Because," she continued, regardless of our modest protestations of incapacity, "I would like the benefit of your judgment and advice in a matter which worries me exceedingly, though you might think it trifling, perhaps. The case is this, I advertised a few days ago for a domestic, and the house has been besieged by applicants ever since; but none of them just suited me, and supposing from the numbers that have called that I should have abundant opportunity to make a good selection, I have

been waiting all day for a suitable one to come along; and now, just at the last moment, and when it is getting so late that there is no hope of another application to-night, one has come whom I like the least of all I have seen, although she comes well recommended, and seems to be capable. But there is something about her look that I cannot get over. I suppose it is foolish in me to imagine so, but it reminds me of the murderess of Mrs. Corriel; and I have not fairly recovered yet from the shock of that dreadful affair. [This terrible tragedy had then recently transpired.] But she comes so well recommended."

"Is there any immediate necessity," I asked, "of making the choice to-night?"

"Yes, that is just what troubles me. You know we give an entertainment here within a week; and I have waited so long that I really cannot do so any longer—I must have a girl to-night. But I wish you would take the trouble to come and look at her and tell me what you think of her. Perhaps it is only a foolish fancy that makes me feel so averse to engaging her; but really, I tremble at the idea of having her in the house."

I complied at once, as a matter of course, and was shown into the room where the girl was waiting for an answer. I did not wonder at the lady's aversion when I once fairly caught sight of the object of it, for a lower type of head and countenance it had seldom been my misfortune to see. Coarse and brutal, the features, though not altogether uncomely, confirmed the promise of the ill-formed head. An expression of low cunning lurked in the eyes, now half-closed, and a sensuality of disposition was revealed in unmistakable characteristics about the lower part of the face, while an expression of stolid indifference rested like a mask upon the immobile features.

The lady, who had been attentively observing me during the brief inspection, seemed to read in my looks the conclusion to which I had soon arrived, as turning to me with a deeper shade of anxiety in her countenance she handed me a paper, simply observing, "These are her credentials." This paper proved to be the usual "character," in very much the same style as the one we had furnished our own domestic in the morning, commending the bearer, in the highest terms, for good conduct and ability during a long period of services, being duly certified by a family of undoubted respectability, well known to me by reputation, though they lived in a distant city. Several other certificates of like import, and all equally well

attested, were handed me for my inspection. All seemed authentic and bore the closest scrutiny without revealing a flaw or inconsistency.

"You see how well she is recommended," said the lady after a few moments silence.

"Do you know those parties?" I asked, pointing to the various signatures.

"Some of them I do, by reputation, but none personally," was the reply.

"And they all live at a distance," I observed.

"What of that?"

"Depend upon it," I continued in a low tone, "these 'characters' are of the kind made to carry in the pocket of a traveling-dress and nowhere else. All the benefit that can possibly be derived from them is obtained now—in the reading. These certificates have either been manufactured to order at some intelligence office, as, I understand, is not unfrequently the case, or they have been purloined from their rightful owner, who certainly is not this individual."

"You think so?" she exclaimed, in great trepidation.

"Most decidedly," I replied, "No girl with such a head and face as that ever lived so long a time in one family and earned such a recommendation in the bargain."

"Oh dear! what shall I do?" ejaculated the lady, in great distress.

"Trouble again, Maria? and about the household plague as usual, eh?" said her husband, who that moment entered. "Well, what's the matter now, won't she suit?"

"I'm afraid not, Robert," replied the lady, in a low tone, glancing nervously at the object of the remark, who seemed to be utterly indifferent to all that was going on.

"Are'n't her testimonials all straight?"

"Here they are; you can judge for yourself."

"Why, I don't see but what these are all right," after a moment's scrutiny, "she promises to be capable, don't she?"

"Oh, yes, capable enough, I dare say."

"Well, then, what possible objection have you to her?"

"To tell the truth, Robert, I don't like her looks."

"Nonsense—as if *that* made any difference. The poor girl can't help the shape of her nose, I suppose, and you certainly would not be so foolish as to refuse a good servant because her eyes did not happen to be exactly the shade to please you? Besides, I don't see but that she looks well enough."

"It is not that, Robert, but I do not like her expression, and, if you notice, she has just such

a turn of countenance as the murderess of Mrs. Corriel, and—in fact, I am really afraid to have her in the house.”

My friend burst into a hearty laugh. “Well, that beats anything I’ve heard for a good while,” he exclaimed at length. “It takes a woman to get a notion, or to frighten herself to death about nothing. Here, after enduring no end of inconvenience, and having the house fairly overrun with applicants, every one of whom you have dismissed upon one pretext or another, now, at the last moment, you refuse one who is perfectly suitable in every respect, for a mere, groundless whim. As for that affair that you speak of, that was in a great measure a newspaper sensation,—not half as bad, I warrant you, as it was represented, if the truth were but known; and even supposing that it were all true, and more beside, the idea of making such a bugbear out of it in connection with a matter like this!—why, Maria, I thought you were more sensible.”

“I wish now, Esther,” said the lady, turning to a relative who was with her, “that I had engaged the other one who came half an hour ago.”

“Well, why didn’t you?” said her husband who had overheard the remark.

“She pleased me in every respect, and I liked her face exceedingly—a good, honest face, though she looked as if she had seen trouble of some kind, and I would have engaged her at once, if it had not been for one thing—she had no references to show. I declare, in spite of that I could hardly bring myself to refuse her; but I thought of you, and—”

“Never do business in that way,” replied the gentleman, promptly. “Have nothing to do with the man or woman who cannot show a good character. But in this case the difficulty is so well met that you really can have no serious objection, depend upon it; I’ll wager anything, she’ll prove the best girl you’ve had yet, even as she comes the best recommended.”

“But, sir,” I interposed, thinking it time to come to the relief of the lady, whose anxiety and aversion seemed rather to increase than diminish with every argument that her husband brought against them, “is there no possibility that these very recommendations may not be genuine? I have heard of such things being made to order before now.”

“Very seldom, very seldom,” was the reply; “now and then, in about one case out of a hundred, it may be so; but in the remaining ninety and nine it is the best and safest criterion we have to go by.”

“Not quite;” I replied; “the shape of the head and the general molding of the features, where it is correctly understood, is a far better test of character than a bushel of certificates. Though not an adept at the art of reading countenances, there is yet enough here that is unmistakable in its character to convince me that your lady’s prejudice is not without foundation.” And I proceeded forthwith to indicate some of the more prominent of the objectionable features that formed the base of my opinion.

The gentleman listened attentively, but with an amused smile upon his lips, and a bantering look in the keen, grey eye; and as we paused to take breath at the end of a long explanatory sentence, he remarked, with the most provoking coolness, “That’s some ‘ology,’ isn’t it? I’ve forgotten just what you call it.”

“It is certainly in accordance with the rules of Phrenology that I have been making these observations,” I replied, a little testily.

“So I thought,” he quietly remarked, turning away with his hands in his pockets. “Come, Cheswicke,” he said, presently, “you are far too sensible, I’m sure, to believe any such nonsense as that; so now that you have shown your gallantry in taking the part of, and supporting the ladies, suppose we leave them to finish their business, while we go and attend to ours;” and he started to lead the way back to the library.

Knowing the uselessness of any further words in the matter, I turned to follow him; but not before I had observed to the lady, in a low tone, “If you must engage her now, do so; but take my advice and keep a strict watch over her movements, and get rid of her as soon as possible.”

“I shall certainly write to her references at the first opportunity and see if her recommendations are all right,” said the lady, in a whisper.

“Whether they are or not,” I replied, “I would most earnestly counsel you to discharge her at the first opportunity; do not keep her in the house a moment longer than is absolutely necessary.”

Whether the girl overheard me or not, I cannot say; we were standing some distance from her, but as I raised my head, at the conclusion of my remarks, I encountered such a look of baleful malignity from beneath the momentarily upraised eyelids—a look that rested with equal intensity of hatred upon us both—that for a moment my blood ran chill, and I dreaded to leave the lady unprotected in

the vicinity of such a creature; but it vanished in a moment, and was altogether so instantaneous, that I was fain to believe it imaginary on my part; and as the lady had not observed it, I was unwilling to add to her fears by any intimation of what had transpired; but with another whispered injunction to be cautious and watchful, I reluctantly rejoined her husband in the library.

Three or four days later, in looking over a paper one morning, I came across an advertisement offering a business opportunity that I had long desired but had despaired of ever obtaining, and which required "unexceptionable references" in the party applying. "In other words," thought I to myself, "we must have a character; there's no help for it now; we really must have a character. And now to determine whence it shall come. To whom shall we apply? There is our enthusiastic friend B—; if we were to refer any one to him, he would give such a glowing account of our many virtues and excellencies that it would all be taken as a piece of hyperbole or sarcasm. There, too, is our apathetic friend M—, who will never commit himself so far as to express a decided opinion upon any person, place, or thing under the sun; and who, consequently, would hardly give any very satisfactory evidence in the matter. We have no enemies that we know of, and there still remains a goodly number of friends and acquaintances who do not pertain to either of the kinds just mentioned." After a little cogitation, I selected the names of two or three individuals whose testimony I preferred above that of any others, and sent them off in my answer to the advertisement.

Meanwhile, even business cares and enterprises did not cause me to forget the dilemma in which my lady friend was placed; and such was my anxiety on her behalf, that I took occasion to call again shortly, and being fortunate enough to see the lady herself, inquired after her welfare.

"The girl does very well so far," she replied in answer to my inquiries upon the subject, "I have no fault to find with her except that, sometimes, when she believes herself unobserved, I catch her regarding me with such a strange expression that it makes me feel a little nervous. She is not liked at all in the kitchen; the other girls vote her moody and unsociable, but as her duties take her there very little, I do not mind that so much. I have written, however, to her references, but have as yet received no answer; and if I do not get

a satisfactory one shortly, I shall follow your advice and get rid of her as soon as this hurried season is over."

A week passed without my seeing or hearing from the lady again; neither (excuse the connection) did I receive any reply to the answer I had written in reference to the advertisement. Accordingly, I wrote again, after fixing upon an early day when, if this did not produce the desired result, I would make application in person, a press of business having prevented my doing so heretofore.

In the meantime, the entertainment at the house of Mr. Robert S— came off, and as I afterward learned was a very enjoyable affair. I was engaged the following morning over my second cup of tea, in reading an account thereof in one of the leading journals, when the Doctor's gig, dashing by at a furious rate in the direction of their house, attracted my attention. As I was not aware of his having any patients in that vicinity other than the family of Mr. S—, I concluded at once that something serious must be the matter with them, or else that it was a runaway. In either case, the Doctor, also, being a personal friend, my interest was excited; and it was not long ere I was fast following the course that he had taken. Arrived at the house, the sight of the gig in its normal condition, albeit well-covered with dust, relieved my apprehensions in regard to the safety of its crewlike occupant; but upon entering, I had ample cause for sympathetic distress, as I found myself in the midst of an agonized group, just in time to witness the dying agonies of an only boy which the physician was vainly endeavoring to alleviate. From the distracted mother no information as to the cause of this sudden and unexpected calamity could be obtained; while the father's whitened lips were compressed so firmly, and such an expression of terrible sternness rested upon his brow as forbade all questioning, for the time being.

At length, from a relative, calmer than the rest, I learned the astounding fact that the child had been the victim of poisonous drugs administered in confectionary on the evening of the party; and that since twelve of that night no one remembered having seen the new girl anywhere about the premises, and that she had not since been seen or heard of. The child had seemed slightly indisposed for a few days past, but nothing was thought of it, its real condition not having been discovered till within half an hour previous; too late, however, for medical aid to effect anything;

and no suspicion of the vile plot that had culminated this morning in the child's fatal attack had entered the mind of either parent. Not the slightest doubt now remained in the minds of any present as to the actor in this infamous affair, as it had been ascertained that the evening previous, when the attention of every one was fully occupied, the new-comer had bribed the nurse, who, dreaming of no harm, was only too glad to have the chance to get down stairs, to let her take charge of the little one for whom she had lately professed great fondness, and whose acquaintance she had cultivated with much assiduity for several days past. Having accomplished her object, and obtained the revenge she was evidently seeking, she had made good her escape, carrying with her a quantity of silver and other valuables.

I did what I could in the case, which was necessarily very little. No need now to reprove the father for his short-sightedness in ignoring palpable facts. Overcome by the most poignant regret he went to the other extreme—regarding himself as the murderer of his child. For a long time nothing could persuade him to take a milder view of the case. Every means had been and were being taken to track the fugitive from justice, but in vain. In some low den of infamy she had found a secure retreat, there to wait until inquiry being baffled and excitement subsided, she could again emerge in search of another victim. I need only add that whether from misdirection, or otherwise, no answer was ever received from any of her supposed references.

A changed man was my friend after this terrible bereavement. Among other things the spirit of thoughtless unreasoning skepticism had been chastised out of him, and replaced by one of sober thought and earnest, calm, dispassionate inquiry, and in many ways he reaped the benefit of the change.

It was some time before my thoughts and interests, so sadly directed, returned to their accustomed channels, and then I began to look with some anxiety for the result of the business effort I had made. After waiting a few days longer for an answer to my oft-repeated inquiries, I was about to carry out my original intention of applying in person, when a message was placed in my hands from the parties in question, informing me that, having applied to two of my principal references for the desired information, the result was so unsatisfactory, that they must decline any further negotiations with me.

In a few moments I was utterly confounded by so unlooked for a sequel to my little enterprise, and I read and reread the brief, curt epistle, vainly seeking for an explanation for such an uncalled for and unexpected statement. Utterly unable to account for it, or to imagine the cause that could have produced it, I was sorely amazed and troubled, until it occurred to me that it must be all a hoax or a good, practical joke, played off by some mischievous friend or neighbor, acquainted with the situation of affairs, on purpose to vex and perplex me. I at once adopted this view of the case, and started off to confirm it.

As I neared my destination, I encountered an acquaintance who, after the usual salutations, invited me, as it was near lunch-time, into a neighboring *café* for refreshments. I declined on the plea of business, and in a little explanatory conversation that ensued, informed him of the trick that had been played upon me, and showed him the note I had received. To my surprise, far from manifesting my appreciation of the joke, if joke it were, he looked grave, examined the document attentively, and regarded me keenly for a few moments, and then said, "You don't understand this, I see; I think I can explain it, however. You'd better come with me first and get a full understanding of this matter;" and so saying, he turned and led the way into the *café*, whither I followed him.

"And now," he said, when we were once fairly seated, "I shouldn't wonder if you were in a peck of trouble, Cheswicke, if you did but know it. That paper which you have taken for a practical joke is a genuine expression of genuine conviction; but from what I heard yesterday and a day or so previous, I am not at all surprised at this, or, indeed, a good deal more. Didn't you make T—— your reference?"

"Yes."

"And H—— your reference?"

"Yes."

"Well, you couldn't have chosen two worse men. T—— imagines he has a grudge against you on account of some speculation wherein, he asserts, you crossed him last fall; though he has never spoken about it before; and, moreover, he is interested in keeping you out of this business, which he is anxious to secure for himself or some of his connections. So you may imagine the sort of a recommendation he gave you."

"But H——, surely, had no reason, real or imaginary, for saying aught of ill against me."

"He has had very little to do with you, you know, and, consequently, has no particular interest in you."

"The very reason, then, why he, being a disinterested party, should testify accordingly."

"My dear fellow, there is no such thing as pure disinterestedness nowadays. Moreover, H—— is a faithful satellite of T.'s, and is bound to think, feel, and testify as he directs."

"But this is downright libelous," I exclaimed, hotly, my anger rising. "I am not going to stand this. Pray, what were the charges brought against me?"

"No special charges were made, but enough was said in a general way, backed up by some unlucky blunders of yours which seemed to give color to all that was implied, to produce the desired effect. That unfortunate affair of R.'s was the worst of all, being so recent and so uncontrovertible; it effectually tied the hands of your friends in the matter, and annulled all that they could say in your behalf."

"What affair was that?"

"Why, haven't you heard?"

"I have not, indeed; I am at a loss to imagine to whom or what you refer."

"Is it possible? Why, the whole town is ringing with it. You recollect, not a great while ago, you recommended a friend of yours, A——, I believe his name was; wasn't it? to a responsible position in the employ of a stranger, who called upon you to obtain information in regard to his character. Well, that gentleman's name was R——; but, surely, you have heard or can guess the rest."

"Neither one nor the other."

"Well, the long and short of it is, that A——, who, on the strength of your recommendation, enjoyed the unlimited confidence of the firm, has turned out to be a most infernal scoundrel. In the short time in which he has been connected with it, he has nearly ruined the business for Mr. R—— through his scheming to get the whole thing into his own hands; but he overreached himself in his haste, and being detected just in time to save things from utter ruin, so far as the firm are concerned, he absconded; and, as has since been discovered, is a defaulter to a large amount. In fact, fresh proofs are coming to light every day.

"The wonder to me is," he continued, as I sat speechless at this information, "that you, knowing as you do, something of Phrenology, should have recommended to such a position a man with such a shaped head as that. Why, W——, the Phrenologist, who has seen him

several times, though he has never professionally examined his 'developments,' tells me that Acquisitiveness was positively enormous, while Conscientiousness and Benevolence were correspondingly small and feeble. When you take into consideration his Secretiveness, Continuity, and Firmness, which were all above the average, you must see not only how entirely unfitted he was for a position like this, but what a dangerous man he really is at all times and in all places. As I said before, it astonishes me that, with all these indications, so apparent as they are to a man like you, who understands so well how to read them, you could ever have recommended him as you did."

"Because," I replied, "for once I chose to disregard science, wherein I might be mistaken, and speak only from personal experience upon which I thought I was justified in relying."

"And from prejudice," interrupted my friend. "It is so," he continued, as I paused and hesitated, "you were prejudiced in his favor, though from what cause I cannot imagine, just as R—— is now prejudiced against you, whom he believes to be the prime cause of all his misfortunes. Some have even gone so far as to assert that it was an understood thing between you and A——, and that you were to have your share in the spoils if he were successful. Of course, we who know you best don't believe any such thing," he continued, as I sprang indignantly to my feet, "but such things will be said; once start a suspicion and there's no telling where it will end. The saying 'A man is known by the company he keeps,' has been used against you in connection with this matter with considerable effect during the last few days."

"But is this thing to go on?" I demanded. "Is this willful and malicious interpretation of an unfortunate and unintentional blunder to be allowed to continue and work fresh mischief, as if it had not accomplished enough already?"

"The case, as it appears, is too well authenticated to admit of controversy, and as to the opinions and impressions to which it will give rise, these you cannot influence save indirectly. You can do nothing, then, that I can see, but bide your time, correct it as far as possible, and for the rest live it down."

"Who would have imagined," I exclaimed bitterly, "that he could have deceived me so—me who believed him possessed of all the cardinal virtues?"

"Ah, he was a cunning old fox," exclaimed

my friend. "He knew well how to cover up his tracks, and mask his batteries, until he was ready to open fire and disclose the cloven foot. But whither away now?" he inquired as I offered him my hand in token of parting—"not after this business again, surely? You could hardly get in there now if you had a host of friends to back you, even if the opportunity had not already passed, as I rather imagine it has."

"No, I shall go first to R.'s and make it right with him as far as I can, and then I shall go home that I may have time to realize the situation and get over the effect of it, somewhat, for this has hurt me more than I can express."

Accordingly, I proceeded at once to R.'s place of business, but, my name being announced, was denied admittance. Insisting upon an interview, however, it was at length granted me, but promised at first to be far from satisfactory. At length, however, I succeeded in shaking somewhat his conviction that my share in his misfortunes was intentional, and in this frame of mind I left him. On my way home, I received additional proof of the credence with which an evil report is always received, and the ease with which "character" is gained or lost in the sight of men. Friends whom I had known for years, and with many of whom I had done business, returned my salutation with coldness, or refused to acknowledge it altogether, while they were few and far between who would approach me with a frank, "What's all this I hear about you, Cheswicke?" and give me a chance to explain.

"Well," thought I to myself, when I had once more recovered something of my normal frame of my mind, and could review the subject calmly, "so much for the value of the 'characters' given by friends or enemies of one another, in forming which self-interest, passion or prejudice plays so very important a part. And yet, a 'character' is a good thing to have—a most desirable thing to obtain." And in spite of the disastrous result of my first attempt to procure one, I was more than ever determined to accomplish my purpose if only for my own satisfaction. "Is there," I thought "a calm, disinterested, yet clear-sighted man among all my acquaintances, to whom I can apply with any confidence as to the result? Yes, there is one. How foolish that I did not think of him before! How foolish that I did not apply to him first! though, unfortunately there are many,

I fear, who would not receive his testimony. No matter, it will be sufficient for me, and to satisfy myself is, at present, the height of my ambition. I will go at once to the Phrenologist, whom I believe to be a thoroughly scientific, and, what is better, a thoroughly conscientious man; and if I do not return with a 'character' in my pocket, worthy of consideration at least, it will not be the fault of my present intention."

Every one knows, who has tried it, the feeling of awkwardness, embarrassment, and apprehension as to the result of the experiment, attendant upon having one's photograph taken, especially if the individual attempting it be not blessed with a very large share of self-conceit, and it has been often and ably commented upon. And to the uninitiated there is something in a phrenological examination which is equally awe-inspiring and trying to one's fortitude, so that upon the first essay, one feels like asking, as did Greeny of the traveling bump-examiner—"Will it hurt?" And if the truth be told, it *does* hurt sometimes—when the phrenologist does his duty. We all know the shock that is given to our vanity and self-complacency, when, having caused every feature to assume the most becoming expression, and having arranged all the *et ceteras* with a view of doing justice to the occasion and to ourselves, and having, as we believe, attained the perfection of arrangement and effect, we are presented with a lifeless, uncouth image which our soul refuses to acknowledge, but which, we are coolly informed is the exact reflection of the features we had imagined so vastly engaging. And as in ninety-nine cases out of a hundred where the result obtained is unflattering, the experimenter will declare the attempt a failure, lamenting the impossibility, in these days of degenerate artistic ability, of getting a decently good picture, so many applicants for a phrenological examination will denounce the whole thing as a humbug, and the examiner a brute or an ignoramus, if they be not found possessed of all the virtues in the highest degree. And here we would observe that a phrenologist must require an amount of moral courage, possessed by comparatively few persons, in order to discharge his duties conscientiously toward a great many cases, though, to judge from some so-called "charts" that we see, the world seems never to have been blessed with a more goodly number of virtuous people than at the present time.

If there is one thing more than another that seems to cap the climax of the chagrin which one naturally feels at a bad or uncomplimentary picture, it is to have a friend by, who stoutly maintains that it is "an excellent likeness." Therefore, in applying for a mental photograph, I took no one into my confidence, but repaired to the rooms of Mr. S— alone. Having taken this precaution at the outset, the reader need not suppose that I intend to disclose to him the result of this experiment, the virtues wherein I was found deficient, the perverse qualities wherewith I was shown to be endowed, or the extent to which my previous opinion of myself was altered; suffice to say that I left the phrenological cabinet convinced that we are fearfully and wonderfully made, mentally and morally as well as physically. Moreover, if any one wishes to engage my services in any Department, I have a "character" to show, to the accuracy of which, having tested it, I am willing to subscribe, and which, I am confident, will be found essentially correct.

It does seem high time that the practical application of this science to the every-day affairs

of life was more general, and that a matter frequently involving issues of such importance should rest upon a firm scientific basis. In the preceding pages we have endeavored to show the unreliability of the "characters" so generally tendered and accepted, and the influences that not unfrequently serve to produce them; and we hope to see the day when, in every grade of society, a phrenological chart, duly attested by some well-known and reliable exponent of the science, shall take the place of these flimsy, and often worse than worthless documents, and shall constitute an authority from which it will not be thought necessary to appeal. But, better yet, in the still more distant future, we look forward to the time when every intelligent man, woman, and child shall be a practical Phrenologist, able to peruse and comprehend the human face divine as readily as they can read the literature of their mother tongue; and when the "character," so plainly written in every countenance, shall no longer be expressed in meaningless hieroglyphics but, their eyes being opened, shall be depicted in signs so plain and unmistakable, that he who runs may read.

Our Country and Its Resources.

That which makes a good Constitution must keep it, viz., men of wisdom and virtue; qualities that, because they descend not with worldly inheritance, must be carefully propagated by a virtuous education of youth.—*William Penn.*

THE UNITED STATES: THEIR PLACE AND USE AMONG THE NATIONS.

SHALL we hesitate to declare the truth? Need the publicist, who deals with the problems presented by the life of mankind in this world, be more reticent than the preacher? When his belief is fixed that God rules the nations, ought he to conceal this central doctrine of all true politics and political economy, because, haply, it is not the common habit of politicians and economists to recognize the Creator and the Preserver in their speech and writings? For ourselves, we decline to leave this highest and grandest truth, apart from which no fact in world-history can be understood or interpreted, solely to the pulpit. God guides humanity to its destined end, and, therefore, amid all the perplexities of the passing day, we are without fear. When we regard the great problem that is being worked out in the

United States, we find assurance and strength in this article of faith. A new life for mankind has been begun here. The world has had experience of republics before; but the best of them were republics more in name than in substance. These so-called republics were, by turns, oligarchies and military despotisms. The few were the rulers; the many were ruled. It is not for a moment to be denied that we are yet a long way from the perfection of our theory. Progress is slow. That perfect round of which the poet speaks is long in the molding. We admit that there is much in our practice that is contrary to republican simplicity, and that there is corruption in high places; but, on the other hand, there is real freedom in the nation, and the power in the people to govern themselves as they will. There is abundance of bread

also, and on such abundance all other possible material good founts.

Thus we perceive a "manifest destiny" in our State, more to be desired than anything which is built upon sword-conquests. It is a part of that destiny, a condition of our national life, that we should undergo an apparently chaotic period, in order that the elements of society may be fused to a plasticity that will take the highest form. The land is open, and we would not close its ports against those who come to us. We get many good men from the old countries of Europe, but it is evident that we cannot obtain even a fair proportion of the best. The States are an asylum for the oppressed, and not merely for those who are oppressed in their political condition, but for those also who feel the sting in their social relations. The majority of men cling to the place of their birth, and, except under compulsion, they will not unloose their moorings. It is the business of man to conquer the earth and make it fertile, and, therefore, the necessary compulsion to duty is in the natural order. The result to us is this: Most of those who come hitherward have felt the evil all their lives; and they are the children of fathers who, for generations, have been impoverished and brutalized. We are not stating the facts too strongly. The doctrine of selection is true within certain limits, and it applies with as much force to mankind as to the lower animals. Bad food, insufficient clothing, and inadequate lodging degrade man. These causes have been at work for centuries in Europe, pressing down the workman lower and lower toward the brute form.

It is not a hundred and fifty years since there were slaves of the soil in Scotland—men and women in slavery as absolute as ever it was in the Southern States. Manufactures, which have given wealth to England, in their beginnings intensified the misery of the working man; and a quarter of a century ago the life of the laborer in England was most terrible in its privations. It was worse in Ireland; but though, since those days, there has commenced a beneficial revolution in the social state of the British Islands, on the Continent of Europe the worker is still systematically oppressed. Of such men are many of the immigrants into the States.

We welcome them, and will find places for them; but let us understand the truth. They cannot be of us at the commencement of their new life in America. There is disruption rather than cohesion in their tendencies. Those who have struggled for political and social freedom in the old world, have struggled in a wild way which comports not with the American idea. They often abuse their newly-acquired freedom, and the fact need not cause surprise. There is always a flow for the tide after an ebb; and when the restraints which have unnaturally limited the advance of the human tide are removed, it rushes faster and further than those whose life-course has been calm and equable can approve. The undisciplined immigrant has to be crystallized upon our form before he can become a worthy citizen of the United States. This work is done here with all who have a sense of manliness in their souls. We believe that men are born free and equal, and that the idea of mastership—by which we mean something different from due subordination—is repugnant to humanity.

If, then, the natural state of man be that of freedom and equality, his happiness can consist in nothing less. The American idea is that of freedom for the individual. Our nation, therefore, is based on the truth, and the republic, as here established, must prevail over all lower methods of government. The mixed elements which now constitute our society will one day—and that not a distant one—concrete into a consistent whole; and, by virtue of our example, many sister republics will arise in the world. If it were not so, there would be no hope for mankind, and the promised millennium would be a dream of the poet. If there were no republic in this New World, then must despotism be the rule of the Old, and even the constitutionalism of England would be in danger. We take our sister nation of the Anglo-Saxon or Anglo-Scandinavian race, as setting forth the best possibilities of free government in Europe. But there is something corrupting in monarchy. Under the rule of kings social status counts for more than worth. This is inevitable. It is also inevitable that men will strive for that which bears the highest value. Exposed to temptations of this kind, liberals fall away from

the faith, political indifferentism grows apace, and the ranks of toryism are recruited by the sons of reformers. If it were not for the stimulus to continued effort which English liberals derive hence, evil days might return to England. They take their inspiration from America, as well as from their own record, even while they are loyal to their own institutions. They see freedom established on this continent, and their hearts are nerved and their hands strengthened for their own fight. Taught by America, they have pulled down the oligarchy of the Revolution, whose power was continued even by the Reform Act of 1832. The idea of a free Church in a free State they have not taken from the Italy of Cavour, but from this land where toleration, as a legal principle, is unknown, inasmuch as there is no place for toleration when all denominations stand on the same level as before the law. The State Church of Ireland is abolished, and the State Church of England is doomed. This latter would crumble to pieces from within if there were no attack on it from without; and it is due to our free system of religion that the religious crisis in England can be passed without fear and in safety. There is no doubt of it.

The United States are as a beacon to the

world. We receive peoples of all kindreds, and, though they may be unconscious of the process, we are molding them anew in their purposes and aspirations in our free nationality. We are taking the first part in the greatest revolution of time—a revolution that is proceeding before our eyes; and going back on what has been said as to our own difficulties, we do not, in the midst of such a movement, expect to escape all its disruptive consequences. But America is fearless in her freedom. We dare to allow the imperfectly educated and the badly trained to exercise the rights of citizenship, and we sow knowledge broadcast, not only among the children of the soil, but among those who are brought hither. We believe in our principles, and faith is courageous. The stranger who visits New York and other large cities perceives evil in them, and we do not deny its existence. If, however, he really has eyes, he will see the good that must overpower the evil. In the schools and in the homes where the traditions of the land are taught, he will find the leaven that will leaven not only the whole mass of society here but also all civilized society the world over. It must be so, for freedom is right, and God rules the nations of the earth.

THE PRESIDENTIAL CAMPAIGN—No. III.

ULYSSES S. GRANT AND HENRY WILSON, NOMINEES OF THE REPUBLICAN PARTY.

WEDNESDAY, June 5th, was made memorable by the opening of another of those great conventions which so distinguish our American politics. It was at Philadelphia that the delegates representing the Republican side of the two great political organizations assembled, and on the sixth day accomplished the purpose of the convention by unanimously re-nominating Ulysses S. Grant for President, for the four years beginning on the 4th of March, 1873. The vote for Vice-President was at the first ballot declared in favor of Henry Wilson, the distinguished Senator of Massachusetts, although Hon. Schuyler Colfax received a very

powerful support, in itself an expression of the prevailing sentiment of gratitude for the important and faithful services rendered by that thorough statesman to the nation.

So much is known concerning these candidates, and so much has been said of them through our columns, that it will be considered scarcely scant justice to present a brief resumé of their respective careers.

ULYSSES S. GRANT.

General Grant, whose past administration has obtained this practical indorsement and ratification, considered phrenologically, is a well-built man, of average stature, and may be pronounced a very good specimen of the

average American man. His brain is of good size in proportion to the body, and it is large in the perceptive, full in the reflectives, large in Constructiveness, Human Nature, Cautiousness, Continuity, Secretiveness, Hope, Spirituality, Conscientiousness, De-

We would pronounce him a man of strong, practical common sense, with an intuitive perception of character. He possesses good mechanical ingenuity, with planning talent, watchfulness, application, policy, prudence, honesty, enterprise, kindness, and generosity,



PORTRAIT OF ULYSSES S. GRANT.

structiveness, Combaticiveness, and Benevolence. The Social affections are also fully developed. Language, Acquisitiveness, Imitation, and Suavity are but moderately indicated. Approbativeness and Self-Esteem are subordinate; but Firmness is prominent.

without much French palaver or make-believe. He is a man of few words; but if actions have any significance, he possesses great courage, fortitude, resolution, perseverance, and executiveness. These are some of the leading points in this character. We may

say that he is no egotist, no vain boaster, and not inclined to turn to the right or the left for the love of praise or for the fear of blame.

The qualities which make the soldier are his, in a marked degree. This has been suf-

quently incurring the censure of others, because of his indisposition to solicit the notice of the public, or cater for the patronage of the influential. No one would claim for him great statesmanship; but as a private American citizen he would pass anywhere as



PORTRAIT OF HENRY WILSON.

ficiently verified; but, at the same time, there are no indications of an overbearing, blustering disposition. On the contrary, General Grant is a modest, reserved man. Although crisp and brief in manner, he avoids conspicuity as much as he can, fre-

quently incurring the censure of others, because of his indisposition to solicit the notice of the public, or cater for the patronage of the influential. No one would claim for him great statesmanship; but as a private American citizen he would pass anywhere as

Ulysses S. Grant was born at Point Pleasant, Clermont County, Ohio, April 27, 1822. His early ancestors were from Scotland, and emigrated to America not long after its set-

tlement by the Puritans. In 1823 his parents removed to Georgetown, Ohio, where he obtained his early education. When seventeen years of age, he was appointed as a cadet to West Point, where he became conspicuous for his courage and manliness, if not for brilliant mental ability. Subsequently to his graduating from West Point, he served in the United States Army in Missouri, Louisiana, Texas, and in Mexico under General Scott.

In 1854 he withdrew from military life, and engaged in agriculture and other pursuits. In 1859 he became interested in the leather trade, and was thus occupied when the late civil war commenced. Then General Grant's old military spirit hurried him into the ranks of the Union soldiers. He raised a company, and went with it to Springfield, Ill., where it was mustered into service. In June, 1861, he was appointed Colonel of the Twenty-first Illinois Volunteers, and immediately went into active operations. His skill and success during the rapid events which characterized the early stages of the war in the West, won from the nation promotion after promotion, until in March, 1864, he had attained the highest position known in the army; and he summed up his brilliant victories by compelling the surrender of General Robert E. Lee, April 9, 1865, and virtually closing a ruinous and fratricidal strife. In the autumn of 1868 he was elected President of the United States by a large majority, the American people thus honoring him as they had honored several of their successful military chieftains, from time to time, with the highest office the nation has to bestow.

HENRY WILSON.

The countenance of the nominee for Vice-President indicates power and settled conviction. The head is very large, and united with a strongly-made and healthy body. The broad shoulders and massive chest of the Senator appear to have been constituted to meet great emergencies, and to sustain heavy responsibilities. The face, although strongly marked, is yet softened and mellowed by a prevailing expression of gentleness and considerate forbearance, so that one is

constrained to pronounce it winning. There is also expression of honesty and candor beaming from the clear and steady eyes, which adds to the pleasing tone of the countenance. Intellectual vigor is ministered to by the vigorous physical functions, and in the organization of the faculties is noticeable a quality of directness and precision, and of earnest scrutiny. The elements which go to make up that essential feature of an admirable character—sound judgment—are certainly his. He has also that loftiness of brow and fullness of top-head which indicate the man of sympathetic and intuitive feeling. Whatever may be the object of his advocacy as a private man, or as a statesman, his efforts would be pervaded with charitable and discriminative consideration. Those movements which have the welfare of mankind as the object, command his interest.

Some years ago, in our *Annual* for 1868, we stated, in the course of a summary of the character of this gentleman, the following:

"Were he to be elected President of the United States, we would guarantee that the best interests of the nation, in all its departments, would be zealously promoted."

So that we may fairly claim to have been foremost in recommending Mr. Wilson's name for the Presidential chair.

Hon. Henry Wilson was born at Farmington, New Hampshire, February 16, 1812. He was early employed on a farm in his native place, where he worked ten years, going to school only at rare intervals. On attaining his majority, he hired himself out to a shoemaker at Natick, Mass., where he accumulated enough money to enable him to study awhile. His plan of education was cut short, however, by the insolvency of the person to whom he had intrusted his savings; and he returned to his former occupation in Natick.

In a speech at Great Falls, N. H., delivered last February, he said, in allusion to his early life, "I left my home at ten years of age, and served an apprenticeship of eleven years, receiving a month's schooling each year, and at the end of eleven years of hard work, a

yoke of oxen and six sheep, which brought me eighty-four dollars. Eighty-four dollars for eleven years of hard toil! I never spent the amount of one dollar in money, counting every penny, from the time I was born until I was twenty-one years of age. I know what it is to travel weary miles, and ask my fellow-men to give me leave to toil."

In 1840 he took an active part in the Presidential canvass in favor of Gen. Harrison. In the next five years he was thrice elected a representative to the Massachusetts Legislature from Natick, and twice as a State Senator from Middlesex County. Here he was known as a zealous opponent of slavery, and introduced in the Legislature a resolution declaring the hostility of Massachusetts against the extension of slavery in America. He took a prominent part in the organization of the Free Soil party, and in 1849 was chosen Chairman of the Free Soil State Committee of Massachusetts. In 1850-51 he was chosen State Senator, and during both terms was President of the Senate. He was elected to the Constitutional Convention of 1853 by Natick and Berlin, and in 1855 succeeded Edward Everett in the United States Senate, where he has been conspicuous as an earnest advocate of all anti-slavery measures. He has taken prominent part in all important debates—on Kansas, the Treasury Note Bill, Expenses of the Government, the Tariff, the Pacific Railroad, and many other topics. In 1859 he was re-elected by Massachusetts to the Senate by nearly a unanimous vote. In 1861 he was made Chairman of the Committee on Military Affairs, and so efficient were his services to the country that Mr. Cameron, the Secretary of War, said of him: "No man, in my opinion, in the whole country, has done more to aid the War Department in preparing the mighty army now under arms." In the regular session of 1861-2 Mr. Wilson introduced a bill abolishing slavery in the District of Columbia, and also the measure for abolishing the "Black Code."

Since that Senator Wilson has maintained his character for loftiness of aim, by introducing or promoting all national measures having a humanitarian application. In his native State, no man has a stronger hold on the hearts of the people.

The following is the series of resolutions adopted by the Convention as

THE PLATFORM.

"The Republican party of the United States, assembled in National Convention in the city of Philadelphia, on the 5th and 6th days of June, 1872, again declares its faith, appeals to its history, and announces its position upon the questions before the country.

"First—During eleven years of supremacy it has accepted, with grand courage, the solemn duties of the time. It suppressed a gigantic rebellion; emancipated four millions of slaves; decreed the equal citizenship of all, and established universal suffrage. Exhibiting unparalleled magnanimity, it criminally punished no man for political offences, and warmly welcomed all who proved their loyalty by obeying the laws and dealing justly with their neighbors. It has steadily decreased with a firm hand the resultant disorders of a great war, and initiated a wise policy toward the Indians. The Pacific Railroad and similar vast enterprises have been generously aided and successfully conducted, the public lands freely given to actual settlers, immigration protected and encouraged, and a full acknowledgment of the naturalized citizens' rights secured from European powers. A uniform national currency has been provided, repudiation frowned down, the national credit sustained under most extraordinary burdens, and new bonds negotiated at lower rates. The revenues have been carefully collected and honestly applied. Despite the annual large reduction of rates of taxation, the public debt has been reduced during General Grant's presidency at the rate of one hundred million dollars a year. A great financial crisis has been avoided, and peace and plenty prevail throughout the land. Menacing foreign difficulties have been peacefully and honorably compromised, and the honor and power of the nation kept in high respect throughout the world. This glorious record of the past is the party's best pledge for the future. We believe the people will not entrust the government to any party or combination of men composed chiefly of those who have resisted every step of this beneficial progress.

"Second—Complete liberty and exact equality in the enjoyment of all civil, polit-

ical, and public rights should be established and effectually maintained throughout the Union by efficient and appropriate State and federal legislation. Neither the law nor its administration should admit of any discrimination in respect of citizens by reason of race, creed, color, or previous condition of servitude.

"Third—The recent amendments to the national Constitution should be cordially sustained because they are right, not merely tolerated because they are law, and should be carried out according to their spirit by appropriate legislation, the enforcement of which can be safely trusted only to the party that secured those amendments.

"Fourth—The national Government should seek to maintain an honorable peace with all nations, protecting its citizens everywhere, and sympathizing with all peoples who strive for greater liberty.

"Fifth—Any system of the civil service under which the subordinate positions of the Government are considered rewards for mere party zeal is fatally demoralizing, and we therefore favor a reform of the system by laws which shall abolish the evils of patronage, and make honesty, efficiency, and fidelity the essential qualifications for public position, without practically creating a life tenure of office.

"Sixth—We are opposed to further grants of the public lands to corporations and monopolies, and demand that the national domain be set apart for free homes for the people.

"Seventh—The annual revenues, after paying the current debts, should furnish a moderate balance for the reduction of the principal, and the revenue, except so much as may be derived from a tax on tobacco and liquors, be raised by duties on importations, which should be so adjusted as to aid in securing remunerative wages to labor, and promote the industries, growth, and prosperity of the whole country.

"Eighth—We hold in undying honor the soldiers and sailors whose valor saved the Union; their pensions are a sacred debt of the nation, and the widows and orphans of those who died for their country are entitled to the care of a generous and grateful people. We favor such additional legislation as

will extend the bounty of the Government to all our soldiers and sailors who were honorably discharged, and who in the time of duty became disabled, without regard to the length of service or the cause of such discharge.

"Ninth—The doctrine of Great Britain and other European powers concerning allegiance—'Once a subject, always a subject'—having at last, through the efforts of the Republican party, been abandoned, and the American idea of the individual right to transfer his allegiance having been accepted by European nations, it is the duty of our Government to guard with zealous care the rights of adopted citizens against the assumption of unauthorized claims by their former governments; and we urge the continual and careful encouragement and protection of voluntary immigration.

"Tenth—The franking privilege ought to be abolished, and the way prepared for a speedy reduction in the rate of postage.

"Eleventh—Among the questions which press for attention is that which concerns the relations of capital and labor, and the Republican party recognize the duty of so shaping legislation as to secure full protection and the amplest field for capital and for labor, the creator of capital, the largest opportunities and a just share of the mutual profits of these two great servants of civilization.

"Twelfth—We hold that Congress and the President have only fulfilled an imperative duty in their measures for the suppression of violent and treasonable organizations in certain lately rebellious regions, and for the protection of the ballot-box, and, therefore, they are entitled to the thanks of the nation.

"Thirteenth—We denounce repudiation of the public debt, in any form or disguise, as a national crime. We witness with pride the reduction of the principal of the debt, and of the rates of interest upon the balance, and confidently expect that our excellent national currency will be perfected by a speedy resumption of specie payments.

"Fourteenth—The Republican party is mindful of its obligations to the loyal women of America for their noble devotion to the cause of freedom. Their admission to wider fields of usefulness is received with satisfaction, and the honest demands of any class of

citizens for additional rights should be treated with respectful consideration.

"Fifteenth—We heartily approve the action of Congress in extending amnesty to those lately in rebellion, and rejoice in the growth of peace and fraternal feeling throughout the land.

"Sixteenth—The Republican party proposes to respect the rights reserved by the people to themselves as carefully as the powers delegated by them to the State and to the federal Government. It disapproves of the resort to unconstitutional laws for the purpose of removing evils by interference with

rights not surrendered by the people to either the State or national Governments.

"Seventeenth—It is the duty of the general Government to adopt such measures as will tend to encourage American commerce and ship-building.

"Eighteenth—We believe that the modest patriotism, the earnest purpose, the sound judgment, the practical wisdom, the incorruptible integrity, and the illustrious services of Ulysses S. Grant have commended him to the heart of the American people, and with him at our head we start to-day upon a new march to victory."

FISHER AMES.

THIS eminent patriot evidently possessed a highly-organized brain and nervous system. So intense and susceptible were its workings that the mind preyed upon a body

by no means robust in its best estate, although a warm, sanguineous temperament contributed in a high degree to vigor and endurance. A truly noble character is expressed in the imperfect portrait. There are the evidences of a clear and penetrating discernment, breadth of comprehension, genial forbearance and

sympathy, appreciation of the humorous and witty, and the ability to use metaphor and the flowers of rhetoric, and to express his opinions with a ready tongue. His was a

nature thoroughly sensitized by a delicate conscientiousness. He was the soul of honor and truth, while a powerful cautiousness, doubtless, so ministered to his circumspec-

tion, that he frequently hesitated too much, and perhaps imputed rashness or temerity to his bolder associates. The right and the true he held paramount to expediency, and his noble views and considerate provision must have contributed considerable to the success of many public measures in those "days which tried men's souls."



The following brief but stirring sketch of this distinguished "father of the Republic" is from the pen of Mr. Parton, and was published in the *New York Ledger*:

And who was Fisher Ames, that his "Speeches" should be gathered and republished sixty-three years after his death? He was a personage in his time. Let us look upon him in the day of his greatest glory.

It was April 28, 1796, at Philadelphia, in the hall of the House of Representatives, of which Fisher Ames was a member. The House and country were highly excited respecting the terms of the treaty which John Jay had negotiated with the British government. To a large number of the people this treaty was inexpressibly odious; as, indeed, *any* treaty would have been with a power so abhorred by them as England then was. Some of the conditions of the treaty, we cannot deny, were hard, unwise, unjust; but, in all probability, it was the best that could then have been obtained, and Mr. Jay had only the alternative of accepting the conditions, or plunging his country into war. One great point, at least, the British government had yielded. After the revolutionary war, the English had retained several western posts, to the great annoyance of settlers, and the indignation of the whole country. These posts were now to be surrendered, provided the treaty was accepted and its conditions fulfilled.

President Washington and the Senate had ratified the treaty—with reluctance, it is true; but still they had ratified it; and nothing remained but for the House of Representatives to appropriate the money requisite for carrying the treaty into effect. But here was the difficulty. The treaty was so unpopular that members of Congress shrunk from even seeming to approve it. There had been riotous meetings in all the large cities to denounce it. In New York, Alexander Hamilton, while attempting to address a meeting in support of it, was pelted with stones, and the people then marched to the residence of Mr. Jay, and burned a copy of the treaty before his door.

"Blush," said a Democratic editor, "to think that America should degrade herself so much as to enter into any kind of treaty with a power now tottering on the brink of ruin, whose principles are directly contrary to the spirit of Republicanism!"

A Virginia newspaper advised that, if the treaty negotiated by "that arch-traitor, John

Jay, with the British tyrant, should be ratified," Virginia should secede from the Union. Indeed, the public mind has seldom been excited to such a degree upon any public topic.

It was in these circumstances that Fisher Ames rose to address the House of Representatives, in favor of the treaty. There was supposed to be a majority of ten against it in the House, and the debate had been for some days in progress. Madison and all the leading Democrats had spoken strongly against it; while Fisher Ames, the greatest orator on the side of the administration, was suffering from the pulmonary disease from which he afterward died, and had been ordered by his physician not to speak a word in the House. Inaction at such a time became insupportable to him, and he chafed under it day after day.

"I am like an old gun," he wrote, in one of his letters, "that is spiked, or the trunnions knocked off, and yet am carted off, not for the worth of the old iron, but to balk the enemy of a trophy. My political life is ended, and I am the survivor of myself; or, rather, a troubled ghost of a politician that am condemned to haunt the field where he fell."

But as the debate went on, he could no longer endure to remain silent. He determined to speak, if he never spoke again; and the announcement of his intention filled the Representatives' Chamber with a brilliant assembly of ladies and gentlemen. Vice-President Adams came to the chamber to hear him, among other persons of note. The orator rose from his seat pale, feeble, scarcely able to stand or to make himself heard; but as he proceeded he gathered strength, and was able to speak for nearly two hours in a strain of eloquence, the tradition of which fills a great place in the memoirs of the time. The report of it which we possess is imperfect, and the reading of it is somewhat disappointing; but here and there is a passage in the report which gives us some notion of the orator's power. One of his points was, that the faith of the country had been pledged by the ratification of the treaty, and that consequently a refusal of the House to appropriate the money would be a breach of faith. This led him to expatiate upon the necessity of national honor.

"In Algiers," said he, "a truce may be

bought for money; but when ratified, even Algiers is too wise or too just to disown and annul its obligation. * * * If there could be a resurrection from the foot of the gallows; if the victims of justice could live again, collect together and form a society, they would, however loth, soon find themselves obliged to make justice—that justice under which they fell—the fundamental law of their State.”

This speech was afterward called Fisher Ames' Tomahawk Speech, because he endeavored to show that if the posts were not surrendered, and not garrisoned by American troops, the Indians could not be kept in check, and would fill the frontier with massacre and fire.

“On this theme,” the orator exclaimed, “my emotions are unutterable. If I could find words for them, if my powers bore any proportion to my zeal, I would swell my voice to such a note of remonstrance, it should reach every log-house beyond the mountains. I would say to the inhabitants: Wake from your false security! Your cruel dangers, your more cruel apprehensions, are soon to be renewed; the wounds yet unhealed are to be torn open again; in the daytime your path through the woods will be ambushed; the darkness of midnight will glitter with the blaze of your dwellings. You are a father—the blood of your sons shall fatten your corn-fields. You are a mother—the war-whoop shall wake the sleep of the cradle.”

He continued in this strain for some time, occasionally blazing into a simile that delighted every hearer with its brilliancy, while flashing a vivid light upon the subject; and I only wish the space at my command permitted further extracts. The conclusion of the speech recalled attention to the orator's feeble condition of health, which the vigor of his speech might have made his hearers forget.

“I have, perhaps,” said he, “as little personal interest in the event as any one here. There is, I believe, no member who will not think his chance to be a witness of the consequences greater than mine. If, however, the vote should pass to reject, and a spirit should arise, as it will, with the public disorders, to make confusion worse confounded,

even I, slender and almost broken as my hold upon life is, may outlive the government and constitution of my country.”

With these words the orator resumed his seat. The great assembly seemed spell-bound, and some seconds elapsed before the buzz of conversation was heard. John Adams turned to a friend, Judge Iredell, who happened to sit next to him, as if looking for sympathy in his own intense admiration.

“My God!” exclaimed the Judge, “how great he is—how great he has been!”

“Noble!” said the Vice-President.

“Bless my stars!” resumed Judge Iredell, “I never heard anything so great since I was born.”

“Divine!” exclaimed Adams.

And thus they went on with their interjections, while tears glistened in their eyes. Mr. Adams records that tears enough were shed on the occasion.

“Not a dry eye in the house,” he says, “except some of the jackasses who had occasioned the oratory. * * The ladies wished his soul had a better body.”

After many days' further debate, the House voted the money by a considerable majority; a large number of Democrats voting with the administration. Fisher Ames was not so near his death as he supposed, for he lived twelve years after the delivery of this speech, so slow was the progress of his disease. He outlived Washington and Hamilton, and delivered addresses in commemoration of both.

The great misfortune of his life was that very ill-health to which he alluded in his speech. This tinged his mind with gloom, and caused him to anticipate the future of his country with morbid apprehension. When Jefferson was elected President in 1800, he thought the ruin of his country was sure, and spoke of the “chains” which Jefferson had forged for the people. When Hamilton died in 1804, he declared that his “soul stiffened with despair,” and he compared the fallen statesman to “Hercules treacherously slain in the midst of his unfinished labors, leaving the world overrun with monsters.” He was one of the most honest and patriotic of men; but he had little faith in the truths upon which the Constitution of his country was founded.

He died at his birth-place, Dedham, Massa-

chusetts, on the 4th of July, 1808, in the fifty-first year of his age. His father had been the physician of that place for many years—a man of great skill in his profession, and gifted with a vigorous mind. Doctor Ames died when his son was only six years

of age, and it cost the boy a severe and long struggle to work his way through college to the profession of the law and to public life. If he had had a body equal to his mind, he would have been one of the greatest men New England ever produced.

ROCKY MOUNTAIN ECHOES.—No. 2.

GLEN EYRIE.*

BY WILLIAM E. PABOR.

GLEN EYRIE, a garden enchanted
By fairies from ages unknown,
And still by the elf-spirits haunted
Who hide in the Temples of Stone—
Whose ruins the garden surrounding
Betoken a problem as grand
As ever the Sphinx is propounding,
Enthroned upon African sand.

For there, in the silence of nature,
The riddle that Edipus read
Had humanity's changeable feature,
But here we have nature instead,
Enthroned where the mountains defend her,
Renewing her youth without fear;
Till the sheen of her magical splendor
Shines through the unchangeable year,

Glen Eyrie, thy nooks and thy corners
Still echo the music of yore,
While under the moonlight the mourners
The fate of the fairies deplore;
And is it a poet's ideal
That Dryads and Naiads still meet,
All under the pines that are real,
In Glen Eyrie's enchanting retreat?

The Bath of the Naiads enrouding,
They drink to the days that are fled,
And the echoes of elf-land resounding,
Rise up through the Pines overhead;
And over, and over, and over,
The stars, looking down from above,
See each elf steal away with her lover
To Queen's Cañon to whisper of love.

Glen Eyrie, thy beauty hath elumbered
In silence and solitude long;
But thy days of probation are numbered,
And silence yields place unto song;
There shall flash through thy cañons fair faces,
And voices of sweetness shall rise,
And summer shall bring back the graces
Of fairy-land's brightest surprise.

But the fairies this time shall be real,
Aglow with the beauty of youth,
Repeating the poet's ideal,
Till his fancy grows into a truth;
And the breeze to the blossom revealing
The whispers it hears in the Glen,
Will be told there are fairies concealing
Themselves in Glen Eyrie again.

* One of the "Gardens of the Gods," near Colorado Springs, Colorado, in which Gen. Palmer, President of the Denver and Rio Grande Railway, resides.

HOMES IN THE WEST.

IT is a fact that new railways through the Western States and territories are opening up for settlement some of the finest farming lands on the continent. The new roads precede settlement, and afford facilities not possible without them. They extend from the great lakes in the north-west to the Pacific, and south to Texas and New Mexico. They cross the great prairies and the Rocky Mountains, cutting up Montana, Nevada, Utah, Wyoming, Colorado, Nebraska, Dakota, Kansas, Indian Territory, Texas, New Mexico, California, etc. We have more miles of railway than any other nation.

West of the Mississippi River the United States still owns 973,482,593 acres, distributed as follows: Missouri, Iowa, and Ar-

kansas, 16,000,000; Dakota and Wyoming, 145,295,284; Montana, 86,904,605; Kansas, 48,148,076; Nebraska, 35,223,637; Colorado and Idaho, 117,800,000; New Mexico and Utah, 224,140,000; Nevada and Arizona, 136,000,000; Minnesota, 36,876,170; Indian Territory, 154,000.

New railways will bring all these lands within reach of markets, and give homes to millions. Uncle Sam is, indeed, "rich enough to give us all a farm."

In the Eastern and Middle States good farming lands are worth from \$100 to \$200 an acre. In the West better—because richer and more easily cultivated—lands may now be had near railways at from \$3 to \$5 and \$8 per acre, and farther away from railways at

\$1.50 to \$2 per acre. Then why should not young farmers of the older States go West, singly or in companies or in colonies, and secure farms at these low prices? If they wish to grow stock, cattle, horses, or sheep by the hundred or thousand, they may go to the pasture lands of Texas, New Mexico, or farther north. If they wish to grow grain they may do so in any of the Northern or Western States. If sugar or cotton, the South is where they must go. We have millions of acres untouched in the sunny South.

Fruits, in great variety, grow in nearly all parts of our country. The orange, the fig, and the banana thrive best in our semi-tropical latitudes. While the hardier sorts—apples, pears, etc., are produced from Maine to California, and from the Gulf of St. Lawrence to points as far south as Kentucky, Tennessee, Missouri, etc. Grapes thrive all the way from the great lakes to the Gulf of Mexico, and from the Atlantic to the

Pacific, save in the snowy range of the Rocky Mountains. To the question, "Where shall we go?" we answer: You may choose your own climate; you may go where you like, and you cannot go amiss, providing you have a clearly-defined object and know what you want, and how to go about its attainment. In the extreme north the winters are long. In the extreme south a tropical sun may keep one over warm, while in the wide belt between the extremes one may choose exactly what he wants.

One who is comfortably and thriftily situated now, need not, should not change; while new-comers from foreign shores, or new beginners, may plant themselves where they like and become self-relying, self-supporting, thrifty farmers, planters, stock-growers, and independent citizens. God bless the East, the West, the North, and the South. Bless our country and our people everywhere. God bless the race!

Physiognomy, or Signs of Character.

*Of the soul, the body form doth take,
For soul is form, and doth the body make.—Spenser.*

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONTINUED FROM OUR JULY NUMBER.]

THE head of a lion may be taken to show the muscular apparatus of a carnivorous animal.

A A. The circular fibers which surround the eyelids, and which are common to all animals.

B C D. Accessory muscles which draw back the eyelids from the eyeball, and give a sparkling fierceness to the eye.

Artists bestow an expression on the eye of the lion which they suppose gives dignity—a kind of knitting of the eyebrows, while the eyelids are straining wide. This is quite incompatible with the powers of expression in brutes. When the lion closes his eyes in repose, the fleshiness about the eyelids and the hair of the skin produce the effect of a morose human expression, but when he is excited, and the eye is fixed, there is no such character.

E F. The mass of muscular fibers, with those concealed under them, are very strong in this class of animals. They raise and expose the teeth with the savage expression peculiar to the carnivora.

G. The muscles which move the nostril in smelling.

H. A muscle which answers to the *zygomaticus* in man, and which must have great power in this animal, as it reaches from the ear to the angle of the mouth. It opens the mouth, retracts the lips, and disengages them from the teeth, as in seizing their prey.

I. The buccinator muscle.

K. Insertion of part of the masseter muscle, one of the powerful muscles that close the jaws.

I observed above that some painters have thought it allowable to give human expres-

sion to the heads of lions, and others have presented it in their heads of horses. I think this is done on a mistaken view, and that it will never enhance the peculiar beauty of any



FIG. 1.—LION'S HEAD—SHOWING MUSCLES.

animal to engraft upon it some part of human expression. Rubens, in his picture of Daniel in the Lions' Den, has given this character to the heads of the lions. It is more than doubtful whether it be in the true spirit of that principle of association which should govern the adaptation of expression and character in producing an ideal form, thus to mingle human expression with the features of the savage animals. It seems, however, that a distinction is to be made when the lion is represented in its natural state and when sculptured emblematically. Represented in his den or in the forest, the picture should possess all the natural character; when couched amid the insignia of empire, there may be a difference.

A horse's head is added in illustration; it is taken from Giulio Romano. The painter has here produced an ideal head: we say that it is a horse, rather on account of the bridle in the mouth than because we recognize the natural character of that animal. Instead of the full, clear eye standing prominent upon the temple, there is an eye sunk deep, with an overhanging eyebrow; the character entirely human, and the expression

thoughtful and suspicious. In the hair of the forehead and in the ears, in the roundness of the head and neck, the artist has preferred the model of the antique to what, in this instance, we must consider to be the finer forms of nature. Here are the nostrils of the horse, but they want expansion; and there are thick and fleshy lips with an open mouth, which no power of association can ever teach us to admire.

There is a spirit in the expanded nostril, a fire in the eye, a kind of intelligence in the horse's head taken altogether; there is a beauty in the form of the neck and an ease and grandeur in the carriage of the head, where strength and freedom are combined, which can not be excelled by the substitution of an ideal form. No doubt the painter, in this instance, wished to avoid that commonness of form which represses sentiment in the beholder, and destroys the poetical effect of a picture; but it is attempted at the expense of truth of character. In the utmost excitement animals of this class do not open the mouth; they cannot breathe through the mouth—a valve in the throat prevents it—so that animation is exhibited only in the nostril



FIG. 2.—THE CHARGER.

and the eye. The open mouth is from the checking of the bit between the teeth, and is never seen when the horse is untrammelled and free.

Such were the opinions delivered in the first edition of this work, and they were drawn from observations of nature, on which I always rest with absolute reliance. Since that time the Elgin collection of sculptures has arrived. These remains of antiquity are of great value to the arts of this country, as they obviously tend to turn the artist's attention to nature, and exhibit to him the consistency of natural form and beauty. The horses' heads in that collection are perfectly natural, and if there be exaggeration, it is only in the stronger marking of that which is the characteristic distinction of the animal.

The next drawing represents the muscles of the horse's head.

- A. A. The orbicular muscle of the eyelids.
- B. An accessory muscle to raise the eyelid.
- C. A very peculiar muscle. It pulls down the eyelid.
- D. A muscle connected also with the eye, and arising from the cartilages of the ear.
- E. A muscle answering to the zygomatic muscle in man.

These muscles surrounding the eyelids of the horse, account for the superior expression of the eye. The muscle *D* seems calculated to operate upon the outer angle of the eyelids, and to enable the animal to direct the eye backward; in this it is probably assisted by the muscle *E*.

F. This forms a class of muscles which descend on the side of the face, and are inserted into the nostril.

G G. Muscular fibers also operating in the distension of the tube of the nostril.

H. A strong muscle which acts upon the cartilage, and distends the nostril with great power.

There is something in the distribution of these muscles which illustrates the character of the class, and accounts for the peculiarity of expression. We cannot fail to observe the difference in the general direction and classing of the muscles of the face in the horse and in the lion. In the carnivorous animal they all tend to lift the lips from the canine teeth, so that they cannot act without showing the teeth with a snarling expression: in the graminivorous animal, on the contrary, muscles having the same place and origin pass to the cartilages of the nose, and inflate it the instant they are excited. It is these

muscles, therefore, more than anything else, which produce the very different character and expression in the two classes of animals.

I I. A strong muscle, which lies under that of the nostril *F*. Its tendon passes forward over the nose, and unites with its fellow of the other side. These together form a broad tendon *K*, which is inserted into the upper lip. There is a similar muscle moving the lower lip, which cannot be seen in this view.

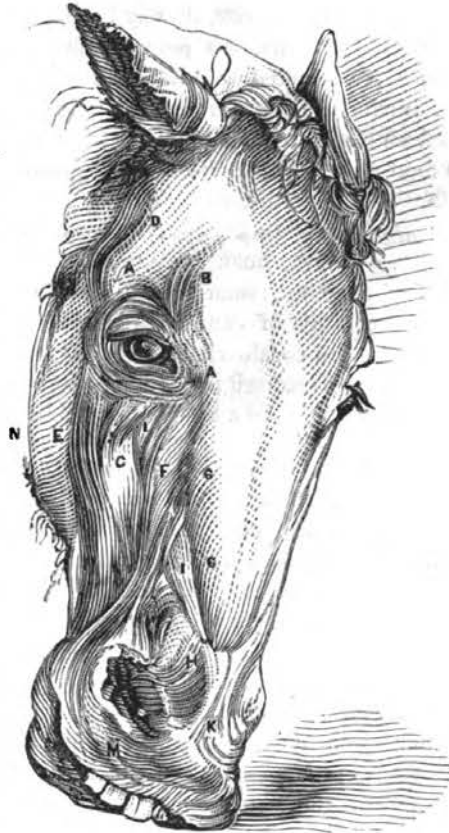


FIG. 3.—MUSCLES OF A HORSE'S HEAD.

L M. The circular fibres of the lips, which in the horse are particularly strong and fleshy.

N. A web of muscle, which is extended from the cutaneous muscle of the neck.

The last-named muscles have all great power, and give extensive motion to the lips. They take a course over the nose in a manner quite peculiar to this class of animals, to raise and project the upper lip, as in gathering food. Any one who feeds his horse from his hand may feel the singular sensitiveness and mobility of his lips.

Looking to these muscles, and contrasting them with the animated sketch by Mr. Northcote, we cannot fail to see how much the form of the head depends upon the teeth being small in front, and large and deep-set at the back part of the jaw; how much the peculiarity of expression in the animal is owing to its breathing through the nostril, and not through the mouth, and to its brilliant eye being placed on the utmost projection of the head, so that, by the slightest turn of the pliant neck, it may be directed backward. Finally, we perceive how the muscles are adapted to draw back the eyelids, to expand the nostrils, and project the lips from the incisor teeth, and also to place the food under the operation of the grinding teeth.

OF THE MUSCLES OF ANIMALS COMPARED
WITH THOSE OF MAN.

Referring to the remarkable difference between the range of expression in man and in animals, and considering that in brutes it proceeds from necessity or voluntary action, while in man there is a special provision for bestowing it—a peculiar set of muscles to which no other office can be assigned—it is proper to reduce the muscles of several quadrupeds into classes, that we may distinguish the characteristics of mere animal expression from those in man.

They may be distinguished as, 1st. Those which raise the lips from the teeth; 2d. Those which surround the eyelids; and 3d. Those which move the nostrils.

1. The first of these classes, viz., *the muscles which raise the lips from the teeth*, admit of a subdivision. In the carnivorous animal the muscles of the lips are so directed as to raise the lip from the canine teeth. In the graminivorous they are directed so as to raise the lips from the incisor teeth. The former I would distinguish by the name *ringentes*, snarling muscles; the latter by the name *depascentes*, muscles simply for feeding.

The snarling muscles arise from the margin of the orbit, and from the upper jaw. They are inserted into that part of the upper lip from which the mustaches grow, and which is opposite to the canine teeth. Their sole office is to raise the upper lip from the canine teeth; and, although they are assisted in this by others (the masticating muscles), I have

ventured to distinguish them particularly as the muscles of snarling. This action of snarling is quite peculiar to the ferocious and carnivorous animals. The graminivorous are incapable of it, and, consequently, these muscles are to be found largely developed only in the former class, not in the latter. In the carnivorous animals it can scarcely be said that there is a perfect or regular orbicular muscle, as in man, for contracting the lips; the lips hang loose and relaxed, unless when drawn aside by the snarling muscles, and they fall back into this state of relaxation with the remission of the action of these muscles.

The chief muscles of the lips, which in carnivorous animals are directed to the side of the mouth, are, in graminivorous animals, directed to the middle of the lip over the front teeth. I call them *depascentes*, from their use, which is to enable the creature to open its lips so as to gather food, and to bite the grass. They are long muscles; one set come down upon each side of the face, and, joining in a broad tendon, pass over the nose to be inserted into the upper lip. Another set run along the lower jaw, to be inserted by a peculiar feathered tendon into the under lip. These muscles are very strong in the horse. They give a peculiar and characteristic expression to the stallion, when he snuffs the breeze, with his head high in air. When he bites, the expression is entirely different from that of the carnivorous animal; instead of exposing the teeth corresponding with the canine, he lifts the lips from the fore teeth, and protrudes them. The carnivorous animals have not these muscles of the fore part of the lip; in them the lips covering the incisor teeth are not fleshy, like those of the graminivorous animals, but are tied down to the gums, and the fore teeth are exposed only in consequence of the straining occasioned by retraction of the side of the mouth.

Although the graminivorous animals do not possess those muscles which so powerfully retract the lips in the carnivorous class, they have a more perfect orbicular muscle surrounding the mouth, and regulating the motion of their fleshy lips.

2. *Muscles which surround the eyelid*.—In man, the upper eyelid is raised by a muscle

coming from the back of the orbit. But animals of prey, in whose eyes there is the peculiar and ferocious splendor which distinguishes the tiger or the lion, have, in addition to this muscle, three others attached to the eyelids, which, stretching the coats and drawing the eyelids backward upon the prominent eyeball, produce a fixed straining of the eye, and a greater brightness. These muscles I have termed *scintillantes*, because, by retracting the eyelids, they expose the brilliant white of the eye, which reflects a sparkling light. In the sheep, besides the proper muscle coming from the bottom of the orbit, there is only a web of fibers to assist in raising the eyelid. In the horse, there

angry spark, as Charon is described by Dante,—

"Ch' intorno agli occhi avea di fiamme ruote,"

or as lighted charcoal, from the bottom of the eye,—

"Caron demonio con occhi di bragia."

It is in this way that a touch of true expression will illustrate a whole passage; so Milton,

"With head uplift above the wave, and eyes
That sparkling blazed." *

3. *Muscles of the Nostrils.*—These are not less distinct and peculiar, in different classes of animals, than the muscles of the eye and lips. In the carnivorous animals, the nose is

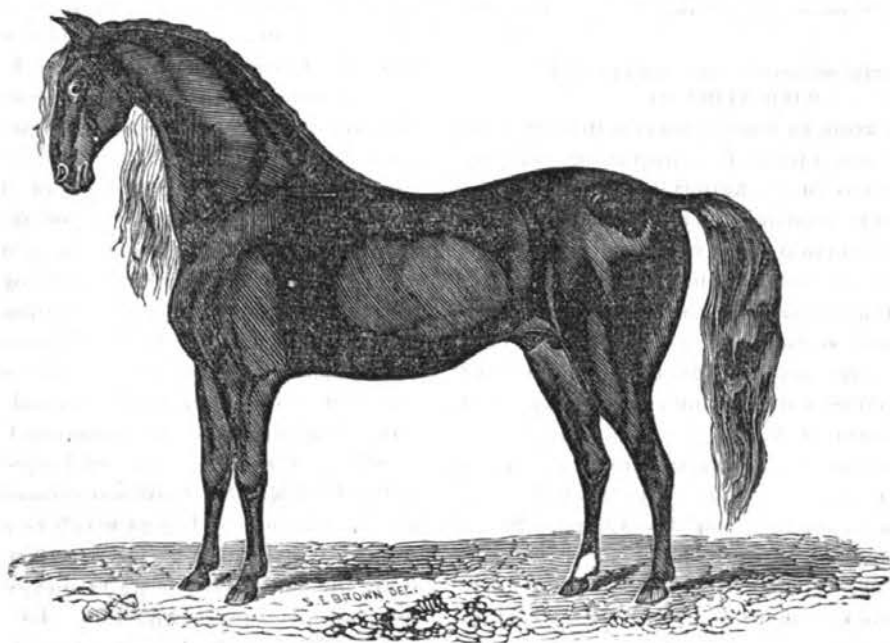


FIG. 4.—"EMPIRE STATE," A CELEBRATED TROTTER.

is a muscle to pull down the lower eyelid; and another, which, passing from the ear to the outer angle of the eyelid, retracts it, and enables the animal to direct the pupil backward, where his defence lies. In the feline tribe light is reflected from the bottom of the eye, when the pupil is dilated; and, as the pupil dilates in obscure light, there is a brilliant reflection from the cat's eye, which we mistake for the indication of passion. All these may be partially displayed in the human eye, as in the bloodshot redness combined with the circle of reflected light from the margin of the cornea, like a flame or

comparatively insignificant, provision being made in the open mouth for any occasional increase of respiration above the uniform play of the lungs; while in the inoffensive animals, which are the prey of the more ferocious, the inflation of the nostril is provided for by the action of another set of muscles.

For example, in the horse, "the glory of whose nostrils is terrible," the muscles which inflate the nostril are very peculiar. They arise like the *ringentes*; but instead of being fixed into the lips, as in carnivorous animals, whose lips are to be raised from the canine

* So also Spenser, B. vi., cant. 7, stanza 42.

teeth, they pass to the nostrils, and, in combination with some lesser muscles, powerfully inflate them when the animal is pushed to his speed, excited by fear, or inflamed to rage.

In the gallery of Florence, there is the head of a horse in bronze, and antique; it is very fine, and in all respects as natural as those of the Elgin Marbles; the mouth is open, but there is a bit in it.

Over the fountain, in the Piazza of the Grand Duke, is placed a group of Neptune drawn by four horses; the mouths of all the horses are open, and as they are free agents, without bit or harness, they seem to be of one mind, and to be expressing the same thing, whatever that may be. They would have been much finer, had the artist given them animation through the eye and nostril, without opening the mouth.*

The horse's mouth is never seen open when the animal is free. Nothing can be finer than the action of a charger in the field; but though he should snort and neigh and throw up his head and mane, with all his excitement he does not open his mouth. In the antiquities of Count Caylus, the horse's head is represented naturally.

We may notice here, that most of the carnivorous animals hunt their prey. For this object, they not only require a peculiar and extended organ of smelling, but the air must be drawn forcibly over the surface on which the olfactory nerve is spread. It appears to me that this accounts for their small, confined nostril, and their breathing freely through the mouth. In smelling, an action of the nostrils takes place which directs the stream of air upward into the cells of the nose, where the olfactory nerve is distributed. This is especially the case in the conformation of the dog's nostrils.

Returning now to the muscles in the human countenance, we perceive that, although the motions of the lips and nostrils in man may not be so extensive as in other classes of animals, there is in his face a capacity for all the varieties of expression which distinguish these creatures. He stands, as we have said, between the carnivorous and graminiv-

orous animals; or, rather, he partakes the nature of both. He has the snarling muscles which so peculiarly distinguish the carnivorous class, while he is able to protrude the lips, and uncover the teeth, like the graminivorous. We have seen that, in the carnivorous animals, the muscles descending from the cheek-bones and upper jaw to raise the lip are strong, and that the orbicular or circular fibers of the mouth are feeble, the lip being attached to the fore part of the gums. In the graminivorous animals, on the contrary, the orbicular muscle has great power, while the elevating and depressing muscles of the side of the mouth are weak. But in man both classes of muscles are combined; the elevating and depressing muscles are fully developed, while the orbicular muscle completely antagonizes them, modulating and qualifying their actions, and bestowing the utmost perfection on the motions of the lips.

Whether we look to the form of the features or to their power of expression, the consideration of these two classes of muscles alone will account for certain varieties in the human face. In one man the excitement of passion may be indicated chiefly by the prevalence of one class, while in a second, another class will predominate in the expression.

If it be allowable to give examples, I would say that in the countenance of Mrs. Siddons or Mr. John Kemble, there was presented the highest character of beauty which belongs to the true English face. In that family the upper lip and nostrils were very expressive; the class of muscles which operate on the nostrils was especially powerful, and both these great tragedians had a remarkable capacity for the expression of the nobler passions. In their cast of features there was never seen that blood-thirsty look which Cooke could throw into his face. In him the *ringentes* prevailed; and what determined hate could he express, when, combined with the oblique cast of his eyes, he drew up the outer part of the upper lip, and disclosed a sharp angular tooth! And is it not this lateral drawing of the lips, and stretching them upon the closed teeth, which make the blood start from them in remorseless hate and rancor?

But, besides the muscles analogous to those

* Milan. "The four horses in the triumphal arch have their mouths gaping wide; not so the coursers last night in the Circus."—*Note from Journal.*

of brutes, others are introduced into the human face which indicate emotions and sympathies of which the lower animals are not susceptible; and as they are peculiar to man, they may be considered as the index of mental energy, in opposition to mere animal expression.

The most movable and expressive features are the inner extremity of the eyebrow and the angle of the mouth; and these are precisely the parts which have least expression in brutes; for they have no eyebrows, and no power of elevating or depressing the angle of the mouth. It is, therefore, in these features that we should expect to find the muscles of expression peculiar to man.

The most remarkable muscle of the human face is the corrugator supercillii (shown in a former number), arising from the frontal bone, near its union with the nasal bones, and inserted into the skin of the eyebrow; it knits the eyebrows with an energetic effect, which unaccountably, but irresistibly, conveys the idea of mind.

The frontal portion of the occipito-frontalis muscle is the antagonist of the orbicular muscle of the eyelids. It is wanting in the animals which we have examined; and, in its stead, fibers, more or less strong, are found to be inserted directly into the eyelids.

The motion of the features which, next to that produced by the corrugator supercillii, is most expressive of human passion and sentiment, is to be seen in the angle of the mouth. At one time I conceived that this distinctive expression was chiefly owing to the *superbus*, which elevates and protrudes the under lip, but I was deceived. The character of human expression in the mouth is given by the *triangularis oris*, or *depressor anguli oris*, a muscle which I have not found in any of the lower animals. I believe it to be peculiar to man, and I can assign no other use for it than that which belongs to expression. It arises from the base of the lower jaw, and passes up to be inserted, with the converging fibers of almost all the muscles of the side of the face, into the corner of the mouth. It produces that arching of the lip so expressive of contempt, hatred, jealousy; and, in combination with the elevator of the under lip, or *superbus*, and the orbicularis, it has a larger share than any other muscle in

producing the infinite variety of motions in the mouth expressive of sentiment.

When we compare the muscles of the human head with those of animals, we perceive many smaller distinctions, which I shall not at present discuss. The *depressor alæ nasi*, the *nasalis labii superioris*, the anterior fibers of the *occipito-frontalis*, are not found in the brute; and, in general, the more minute and fasciculated structure of all the muscles of the lips, in the face of man, shows a decided superiority in the provision for motion of the features.

We have already observed that the faces of animals seem chiefly capable of expressing rage and fear; even pain is indicated more in the voice, and in writhing and struggling.

The rage of the graminivorous animal is chiefly visible in the eye, in the inflation of the nostril, and in the disturbed state of the body. It is expressed most strongly by the carnivorous animals; in them it is wild, ferocious, and terrifying. Their expression of rage, so far as it appears in the face, is shown by the strong action of the *ringentes*, or snarling muscles, the exposure of the canine teeth, the gnashing of the tusks, and the brilliant excitement of the eye. The expression of human rage partakes of both; the corresponding muscles of the lips and nostrils producing a similar action to that in animals; an exposure and clenching of the teeth; a degree of sparkling of the eye, and an inflation of the nostrils. Of a face under the influence of such actions, a spectator would infallibly say that the aspect was brutal, savage, and cruel. But when the corrugator supercillii, a muscle peculiar to human expression, is brought into action, the sign is altered. The eyebrows are knit, the energy of mind is apparent, and there is the mingling of thought and emotion with the savage and brutal rage of the mere animal.

In man, the actions of the frontal muscle of the corrugator supercillii, and of the orbicular muscle of the mouth, give much expression. If, instead of the retraction of the lips and the exposure of the teeth, as in the rage or pain of animals, the mouth is half closed, the lips inflected by the circular fibers and drawn down by the action of the peculiarly human muscle, the *depressor anguli oris*, then there is expressed more agony of

mind than of mere bodily suffering, by a combination of muscular actions of which animals are incapable.

The action of the orbicular muscle of the lips is, indeed, the most characteristic of agony of mind and of all those passions which

with a shrinking of alarm in the more ferocious, and a straining of the eye and inflation of the nostril, with trembling, in the milder. In human fear and suspicion the nostril is inflated, and the eye has that backward, jealous, and timid character which we see



FIG. 5.—THE RESCUER AND THE RESCUED.

partake of sentiment; in grief, in vexation of spirit, in weeping, it modifies the effect of the muscles of animal expression, and produces human character.

Fear is characterized in animals by a mingling of anger and of preparation for defense,

in the horse, and in the gentler classes of animals.

The orbicular muscle of the lips, with the system of elevating and depressing muscles in man, lead to expressions peculiarly human. And here I may observe, that expression is

not always the effect of a contraction of the muscles of the face, either general or partial. It proceeds rather from a combined action of the muscles when under passion; for it is often the relaxation of a certain class, more than their excitement, which gives expression, and of this smiling and laughter furnish the most apposite examples.

The capacity of receiving ludicrous ideas is as completely denied to animals, as they are utterly incapable of the accompanying action of laughter. Dogs, in their expression of fondness, have a slight eversion of the lips, and grin and snuff amid their frolic and gambols in a way that resembles laughter; but in all this there is nothing which truly approaches to human expression. That is produced by the relaxation of the orbicular muscle of the lips, and the consequent preponderating action of the elevating muscles; and, of course, it can exist only in a face which possesses both the orbicular and the straight muscles of the lips in perfection.

In the emotions of contempt, pride, suspicion, and jealousy, the orbicular muscle and the *triangularis oris* produce, by their combination, the arching of the lips and the depression of the angle of the mouth. The horizontal drawing of the lips which just discloses the teeth, and betrays the severe or bitter and malignant passions, is owing to a more general action of the muscles overcoming the opposition of the orbicularis.

In grief, the muscles of the eyebrow and those of the lips are combined in expression; hence the union of that upward direction of the extremity of the eyebrow characterizing peevishness, discontent, and sinking of the spirits, with the depression of the angle of the mouth, which so distinctly indicates the harassed and subdued state of mind.

By the combination of those muscles of expression, much of that various play of the features expressive of human passions, as joy, hope, admiration, anxiety, fear, horror, despair, is produced; and thus, while the human countenance is capable of expressing both the rage of the more ferocious animals and the timidity of the milder, it possesses, by the consentaneous action of a few super-added muscles, powers of expression varying almost to infinity.

It is curious to observe how the muscles

thus afford a new occasion of distinguishing the classes of animals, and how, as signs of superior intelligence, they give proofs of the



FIG. 6.—COUSIN.

endowments of man, and the excellence of his nature. The full, clear eye, the arched and movable eyebrow, the smooth and polished forehead, as indicating susceptibility of emotion and power of expression, are grand features of human character and beauty; and it is the perfection of beauty when the spectator is made sensible of this inherent, this latent power, even while no prevailing passion affects the features. But a great portion of the beauty of the human face is in the nose and the mouth; in a nostril which has a capacity for expression, without being too membranous and inflatable, for that produces a mean and imbecile kind of fierceness; and in lips at once full and capable of those various modulations of form which are necessary to speech and the indication of human feeling.

[TO BE CONTINUED.]

DENVER.—The growth of Western towns is a perpetual marvel. There is Denver, nearly a thousand miles away, nestled under the beetling brows of the Rocky Mountains, one of the liveliest little cities in the country. *Lippincott's Gazetteer* of 1864 does not even give its name, but the United States census of 1870 enumerates its population at four thousand seven hundred. To-day Denver is a brisk, bustling place of eleven thousand people, the depot of five railroads, the focus of travel to and from the mining regions of Colorado, the distributing point of a large section, and in

enterprise a real wonder. It crouches twelve miles from the foot-hills of the mountains, five thousand feet above the level of the sea, in view of the most majestic scenery in the whole world, and in an atmosphere than which there is none more salubrious on this continent. It has a regular municipal government, and in its stores and shops, its newspapers, the character of residences and public buildings, wears the proud air of a metropolis.—*St. Louis Republican*.

[Aye, and why not? If one would meet enterprising people he must go West. Chicago and St. Louis were Western towns "long, long ago;" but Denver, Omaha, St. Paul, are now among the rising Western cities. Denver must, inevitably, become an important business center—it is so now—and will ere long count her 20, 30, 40, and 50,000 inhabitants. Then the great parks, the mountains, and the plains adjacent will be *alike* with civilization and all the industries.]

Department of Physiology—Our Sanitarium.

The truths of Physiology should be inculcated and enforced early and earnestly, and with the emphasis of high religious duty.—*Yonemas*.

DISEASES OF THE SKIN.

BY R. T. TRALL, M.D.

MEDICAL authors have distinguished not less than three hundred diseases and morbid conditions of the skin, to which they have given distinct names and diagnoses. Hippocrates divided cutaneous affections into two classes, local and constitutional, the latter class embracing the exanthema, or eruptive fevers—small-pox, measles, erysipelas, scarlatina, miliary fever, and plague. Riolanus, early in the seventeenth century, arranged them into three groups or classes—Pustules, Deformities, and Tubercles. Plench, in 1776, arranged them into eight orders. Alibert, still later, made a "natural classification," constituted of a single group, *Dermatoses*, divided into twelve sub-classes or smaller groups. Later authors, among whom are Wilson and Bulkley, have extended the catalogue of groups or classes to thirty or forty, each including several species or varieties; but, for all practical and useful purposes, they may be reduced to the following:

1. Exanthema.
2. Rashes.
3. Eruptions.
4. Discolorations
5. Morbid Growths.
6. Parasitic Affections.

The exanthema are essentially febrile diseases, and embrace the eruptive fevers above mentioned. The rashes include a variety of affections usually denominated erythema, or inflammatory blush, as urticaria, rose-rash, etc. The third group embraces all of the affections to which the term cutaneous eruptions is applied, in its strict or limited sense, as pimples,

humors, salt-rheum, tubercles, eczema, tetter, scald-head, pemphigus, rupia, impetigo, chilblains, etc. The fourth group includes blotches, spots, freckles, stains, leprosy, nævi, etc. In the fifth group are found excrescences and tumors, as corns, warts, bunions, wens, etc.; and in the sixth group are scabies, grocer's itch, and all diseases induced by insects which attach themselves to or burrow and breed under the cuticle.

HISTORY OF SKIN DISEASES.

Some two thousand years ago the Hindoos attributed all diseases of the skin to worms; and many persons nowadays mistake the fatty matter, with a black speck externally, which they squeeze out of the sebaceous follicles, for veritable insects or worms. In the Bible account of the human race, the first prevalent and prominent diseases were those of the skin. The leprosy was the extreme and dangerous form. Moses clearly describes two distinct forms of leprosy, one of which was mild and the other malignant. "Moses," says Dunglison in his "History of Medicine," "has given the least equivocal puffs of his medical proficiency in that portion of his laws which comprises his hygienic precepts, and in the description of those characters by which the white leprosy might be discriminated, as well as of the means which ought to be had recourse to for its cure. He teaches how to distinguish the spots which announce the speedy invasion or existence of the lepra from those which ought not to inspire suspicion, and treats fully, in the 13th chapter of Leviticus, of the various

symptoms of that dreaded affection." Again, says Dunglison, "The Levites alone knew how to treat the lepra. They isolated the patient, purified his body by repeated ablutions, and offered up expiatory sacrifices."

As the Hebrews became gross in their dietetic habits, and sensual generally, diseases of the skin became correspondingly prevalent. Running sores, ulcers, boils, or carbuncles were also common, as we learn from the law of uncleanness applied to issues in the 15th chapter of Leviticus. The careful reader of the Scriptures will not fail to notice that the term plague is frequently applied to the malignant form of leprosy. In the middle ages the cities of the Old World were frequently ravaged by a fever which was termed the "plague," the "black death," and the "great mortality." The difference between the leprous and the fever plague was owing simply to the difference in the rapidity with which the causes were applied. If the system becomes rapidly infected with impurities a febrile disease will be the consequence, as in the case of typhoid fevers, and, indeed, all fevers of the continued type. If the accumulation of poisons or impurities is more gradual, and the system has sufficient vigor to make the remedial effort in the direction of the cutaneous emunctory, diseases of the skin, without fever, will be the consequences.

The first recorded general plague in all parts of the world is said to have occurred 534 B.C., although it had occurred in Athens and Rome nearly a century before, and in Egypt and Syria two centuries earlier still.

Fevers are not now such desolating scourges as they were some centuries ago, for the reason that the people are less filthy. They may have less vital stamina, but they pay more attention to personal cleanliness. Modern cities, also, are under better sanitary conditions and regulations than were those which were so severely and so repeatedly desolated with the plague. Wider streets, improved sewage, better ventilated houses, and the prompt removal of offal, have rendered pestilences of all kinds less prevalent in many cities.

Cutaneous affections are plagues diluted. They are pestilences of the sporadic kind. The causes of both are similar; but plagues require filthy surroundings as well as foul blood, while skin disease may result from impurity of blood when all the surroundings are hygienic.

NATURE OF CUTANEOUS DISEASES.

Eruptions of the skin are efforts of the sys-

tem to rid itself of morbid matters through the cutaneous emunctory. If the remedial effort is violent there will be fever, as in the exanthems. If the effort is more gentle, the result will be pimples, vesicles, scalls, ringworms, blebs, eczema, etc., according to the amount and kind of impurities existing in the system. If the glands and follicles of the skin become much obstructed, or injured mechanically, excrescences, tubercles, tumors, and other abnormal growths may appear. If the morbid element is chiefly bile, erysipelatous rashes, tetters, salt-rheum, pimples, and blotches will result.

Erysipelas fever is the most striking illustration of a bilious humor. It never occurs except when the whole mass of blood is surcharged with biliary elements, and the attempt of the system to get rid of it rapidly through the skin is what constitutes the exanthem known as erysipelas; but, if a less quantity of bilious matter were in the blood, or a less violent effort made to deterge it, the cutaneous affection would be some one of the forms of chronic disease above mentioned.

Discolorations of the skin may result from deposits of biliary matter in the cutaneous glands and follicles, as seen in the mottled faces and foreheads of those who have long suffered of torpid livers; or from the extravasation of thin and putrescent blood under the cuticle and in the areolar tissue of the skin, as seen in putrid fevers; or from the use of certain drug-medicines, as in the case of the "blue disease" occasioned by nitrate of silver.

As a rule, the more vigorous the circulation is, the more liable is the person to rashes and humors on the surface when the blood is impure. When the circulation is feeble, the depurating process will be attempted *from* the skin instead of toward it. The patient will then suffer of humors and eruptions on the mucous surfaces. He may have "canker of the stomach," throat-ail, duodenitis, catarrh of the bowels or bladder, or the mucous membrane of the whole alimentary canal may be in a state of chronic inflammation, quite analogous to erysipelatous, herpetic, and eczematous affections of the skin.

The sympathy, as it is called—the co-relation properly—between the skin and mucous membrane is very intimate. Both may be employed as depurating surfaces for morbid matters; but the safer remedial effort is always in the direction of the skin, and this principle explains why it is so dangerous to repel humors from the surface, or "strike them in." Repelled

small-pox is always fatal; and if the eruptive stage of measles or scarlatina is checked suddenly, the patient is very apt to die as suddenly. Nor can chronic eruptions of any kind be repelled from the surface without danger. A few years ago a talented young lawyer, Augustus King, Esq., boarded at my institution in New York. He was badly disfigured by pimples and blotches on the face, the result of "high living" and strong coffee. He was not my patient, but came only as a boarder for the advantages of a hygienic dietary. Not improving as rapidly as he desired, after a few weeks he procured a few bottles of some new nostrum which warranted to cure all manner of diseases in general, and all affections of the skin in particular. After taking the medicine a couple of weeks (unknown to me, of course), he became suddenly delirious. His brothers were informed of his condition, and, instead of putting him under hygienic treatment as I advised, took him to the asylum at Flushing, L. I., where he died the next day. His death was clearly owing to the effect of the medicine in transferring the remedial effort from the surface, where it was safe, to the mucous membrane, where it proved fatal.

Children suffering of scarlatina, are often killed by a single dose of castor-oil administered just as the eruption is making its appearance on the surface; and a bleeding in that stage of the disease is as fatal as a bullet through the heart.

CAUSES OF CUTANEOUS DISEASES.

From what has been said already, it will not be difficult to understand the etiology of skin diseases. The miliary fever is a good illustration of the whole subject. This fever is attended with a fine eruption resembling millet-seeds, and is usually caused by hot drinks, stimulating condiments, or indigestible food, in connection with over-heated and ill-ventilated apartments. A similar rash or eruption sometimes occurs in hot weather after eating freely of stale cheese, sausages, or shell-fish. All of these causes tend to check the excretion of bile, which, accumulating in the blood, induces the remedial effort to expel it through the surface; and for these reasons miliary fever is very common with lying-in women. It has prevailed as an epidemic in seasons when prolonged heat and the dietetic errors above indicated combined to produce an extremely bilious condition of the blood.

It is safe to say that three-fourths of all the chronic eruptions of the skin, which are regarded as distinct diseases by medical authors,

are caused immediately by defective biliary excretion. The remote causes are unhygienic habits of all kinds, but more especially irritating condiments and gross or constipating food. Butter, cheese, and sugar are among the articles of diet in common use which are especially conducive to bile, humors, and cutaneous eruptions. But, probably, the use of fine flour (and if fermented so much the worse), because of its constipating effect, is among the most efficient of the predisposing causes. Hog's lard, which, although condemned by Moses and all sound physiology, is almost universally employed as a shortening or seasoning material by civilized nations, is among the worst things that can be named to render the blood foul, the secretions impure, the biliary excretion viscid, and the skin rough, blotched, and eruptive. Combinations of fine flour, sugar, butter, and eggs, as in many forms of fancy fruit and wedding-cakes, are extremely constipating to the bowels, obstructing to the liver, and the cause of pimples and warty excrescences on the skin.

The different kinds of alcoholic liquors, when used excessively, are well known to occasion very different appearances of the skin. Thus brandy flushes the face, rum reddens the nose, gin induces paleness, and beer a lividness of the surface. Strong coffee often occasions a dark-crimson discoloration of the face, more particularly manifested on the nose, and worst on the very tip of the nose.

These different effects of the different kinds of alcoholic liquors are easily explained. These liquors are all compounded of alcohol, water, and various foreign ingredients or drugs; and it is the drugs which give them their peculiar properties. Brandy is medicated with aromatics, which, being medicinally stimulant, are expelled through the surface, thus occasioning redness, or a feverish flush, as all stimulants do. Gin is medicated with diuretics, which are excreted in the direction of the kidneys, thus determining circulation from the skin. Whisky, which is only diluted alcohol—alcohol and water—is neutral in this respect; that is, it is expelled through the emunctories generally, and not especially in any one direction; hence it does not materially affect the color or appearance of the surface. The various kinds of wine affect the skin very differently, because they are very differently drug-medicated, some occasioning redness, like brandy; and others paleness, like gin; and others neither, like whisky. New cider is more like brandy in its effects on the skin, while old or sun cider is more diuretic, like gin. The

various brands of ale, porter, beer, and all malt liquors, are more like brandy than gin in discoloring the skin. They occasion at first a dark crimson flush, verging in time to lividness, and followed eventually by a dropsical swelling of the skin. Of course the degree of discoloration, or other cutaneous affection resulting from any kind of alcoholic liquor, is more or less modified, diminished, or intensified by other habits. Constipating food and sedentary occupations will aggravate the tendency to discolorations of the face, while the opposite circumstances will make the paleness more visible, as the balance of *medication* in the liquors is stimulant or diuretic.

It is alleged that strychnine, a powerful narcotic, and digitalis, a potent sedative, are used extensively in adulterating liquors. The effect of these drugs will be "contra-stimulant;" that is, they will determine circulation from the skin, and thus aggravate the pale-facedness.

Young persons whose blood has been depleted, and whose vitality has been exhausted from any cause, are liable to ugly and obstinate pimples and blotches of the face. The immediate cause of this condition of the skin is the same as in the other cases mentioned, viz., accumulated bile elements in the blood obstructing the glands and follicles of the skin, and the more difficult to remove because of the enfeebled circulation.

Another cause of the worst forms of pimpled and eruptive faces, of which I have seen many examples, but which is not mentioned in medical books, is mercurial medicine. Calomel, blue-pill, and other mercurial preparations, are supposed to have a special action on the liver; and, although the theory is erroneous, they are extensively prescribed in all diseases in which the liver is supposed to be particularly implicated. If the doses are several times repeated, the patient salivated, or kept on a "mercurial course" for a week or two, the function of the liver is certain to be very badly damaged. The organ, ever after, will be more or less torpid, and the skin, having to do some of the liver's work in excreting bile elements, will be liable to pimples, blotches, warty excrescences, and eruptions, precisely in the degree that the liver has been injured.

I have had not less than twenty lady patients, of middle age, whose faces were horribly discolored and disfigured with pimples, tubercles, and livid blotches, and in every case the woman had been severely salivated in early life. The function of the liver had been ruined

forever, and the skin of the face, with the mucous membrane of the mouth and throat, were doing vicarious duty for the liver, hence cutaneous eruptions, catarrhal affections, throat-ail, etc.

Children often inherit torpid or inactive liver, especially from parents who have been mercurialized. The following case is typical of the whole. A wealthy gentleman of Philadelphia brought his daughter, eighteen years of age, to me for consultation. She had always been troubled with pimples and blotches of the face, which were always worse in warm weather. Her general health was considered as good. Her organization was, externally, much better than the average. She had never been laced with corsets, stunted at school, nor pampered with luxuries. Indeed, her whole manner of life had been very nearly hygienic. Before she was born her parents became interested in the health-reform doctrines as then taught in water-cure and phrenological journals, and adopted their teachings.

As I could find nothing in the history of the young lady to account for her mortifying affliction, I sought for a cause in the history of the parents. The mother was a remarkably healthy woman; had never been sick much, and then had taken but little medicine, and "Homœopathy" at that. It was plain that no malorganization had been inherited from the maternal side. I then questioned the father, but at first could get no satisfaction. But on pursuing the inquiry, like a lawyer determined to extort something from the witness to make out his case, I learned that, seven or eight years before his daughter was born, he had typhoid fever, and was severely salivated. He had a slow convalescence, and for several years thereafter he was very dyspeptic, with frequent "bilious turns" and "attacks" of sick-headache. The mystery was solved. The mercurial medication had nearly destroyed the function of the liver, and the child had inherited a predisposition to skin diseases.

It ought to be known to all persons, and to mothers especially, that if the body is often overheated, or the mind continually worried, during gestation, the liver will become chronically congested, and the child will inevitably have a predisposition to morbid humors and rashes of some kind. Some children are born with eruptions on the mucous surfaces and erysipelatous rashes over the whole skin, because their mothers were overworked and overheated during the whole period of pregnancy. If to these causes are added an irri-

tating regimen, consisting of the excessive use of salt, butter, old cheese, greasy pastry, vinegar, and pepper, the matter is still worse. The child will be the victim of aptha, gum-rash, skin-rashes, scalls, blebs, tetters, etc., if it has vigor enough to determine the morbid matter to the surface; or, if too feeble for this, the glands will swell, and the "scrofulous diathesis" appear.

TREATMENT OF CUTANEOUS DISEASES.

In a majority of diseases of the skin the simple indication of cure is, to purify the blood. This applies to all acute or febrile cases. In some of the chronic cases there is a sub-indication, to restore the function of the liver by special appliances. The common sense of all mankind, and the teachings of all medical schools, recognize these indications. But when we come to the way and manner of doing it—the *methodus medendi*—everything is confusion worse confounded. Everybody knows of something that is great in purifying the blood, and grandly antibilious on the liver; the quacks parade their never-failing nostrums, indorsed by innumerable certificates of possible persons and impossible cases; and in the ponderous *materia medica* of the regular profession, detergents, deobstruents, diluents, colagogues, hydragogues, diaphuretics, diuretics, purgatives, and alteratives, derived from the mineral, vegetable, and animal kingdoms, are named by the hundred. Some are said to attenuate the humors, others to remove effete matters, others to neutralize noxious agents, and others to force the torpid or exhausted organs to perform their duty. What nonsense!

"Now, see how plain a tale shall put you down."

These medicines are said to possess inherently certain medicinal properties which act on particular parts or organs by some elective or special affinity. I deny the assertion. I deny that any such "properties" exist, or that any such action takes place. Drugs do not possess any medicinal properties whatever in the sense represented in medical books and quack advertisements. They do not act on the living organs at all, but are acted on by them. They are themselves causes of disease. They are simply poisons, and have no "properties" whatever in relation to vitality except *non-usability*. They do, indeed, relieve symptoms. They "cure one disease by producing another." But to say that poisons or impurities of any kind can purify the blood or restore normal functional action, is as absurd as to recommend a pound of dirt for a foul stomach, or excessive labor for exhausted vitality.

WHAT IS PURIFICATION?

It seems to me that if the nature of this process were better understood we should have less occasion to make apothecary shops of our stomachs, and less willingness to be poisoned, because we are sick. As applied to air, to water, to food, to dwellings, to cess-pools, gutters, stables, and other things and places outside of the vital domain, this subject is very well understood. Everybody knows that the process consists in removing the offensive material. The process is just as simple, and the plan is precisely the same, in the vital organism; but, because the vital machinery, under normal conditions, is self-cleansing, the people in general, and the doctors in particular, are strangely muddled on the subject. They can see no way to "aid and assist nature" except by adding to the impurities.

If some enterprising fellow-citizen should take the stagnant fluid of the gutter (which holds in solution several saline and organic poisons and impurities, but which, in their separate states, and in the apothecary shop, are medicines), mix it with alcohol, sugar, or vinegar, or any other antiseptic, and administer the stuff in moderate doses to all sorts of invalids under all circumstances, he would have as good and valuable a panacea as was ever invented. If a thousand persons could be induced to take his medicine, he might get at least nine hundred certificates of wonderful cures. In nine cases out of ten there is a tendency to health. The immediate causes are temporary, and will soon be removed; and whether the patient take medicine or not, he will soon recover, provided the doses are not too large. He recovers in spite of the medicine, and the medicine gets the credit of curing. All the medicinal springs in the world—chalybeate, iodine, alkaline, saline, or sulphur—so celebrated for cutaneous affections, are no better for the permanent health of the patient than the "Extract of Gutter" would be.

We may purify air and water by chemical agents—absorbents and disinfectants. This is accomplished by removing the offensive material. It is either absorbed directly and fixed in some other substance, or decomposed and then removed. There is no absorbent and disinfectant of deleterious gases equal to pure, dry earth.

But there is nothing analogous to this in the living organism; for here everything must be transitional, and nothing fixed. Purification is limited to the simple process of expulsion. The offensive material must be got rid of at

any cost of vital power; hence, so long as it is present, the vital powers must expend more or less of their unreplaceable fund of life in warring upon it. Were noxious matters allowed to accumulate indefinitely, the channels of life would soon be so obstructed that death would result.

To purify a vital organ, the noxious agent must be removed. You may apply any quantity of soap, alkali, and other chemicals to dirty clothes, put them in water, and let them remain there; but they will never become clean. They must be washed, and that means removing the particles of impurity, now held in solution, from the fibers of the cloth. Suppose the laundress should fill the interstices of our dirty clothes with soap and sal soda, and dry them. They might be partially deodorized, but they would not be disinfected. They would be dirtier than before, by the addition of poisons to impurities. Yet this manner of medicating dirty clothing is no more irrational than that of purifying the body by poisonous medicines. Soda will relieve sour stomach, opium will allay pain, calomel will move the bowels, ipecac will nauseate the stomach, "bitters" will provoke appetite, hot drinks will occasion sweating, snuff will excite sneezing, and so on to the end of the chapter; but what has all this to do with purification?

It seems to me that as much physiology as a school-child could learn (by the aid of a competent teacher) in an hour, ought to make this matter plain.

The living organism is self-regulating. The vital processes (distinct from the mental) may be all summed up in the word nutrition; and nutrition means assimilation and disintegration—the conversion of alimentary materials into structure, and the removal of the debris, or waste matters. The digestive system prepares the materials for assimilation, and the excretory organs—the skin, lungs, liver, bowels, and kidneys—carry off the waste matters. It is clear, therefore, that if the excretory organs are defective in action the waste matters will accumulate, and the blood will become foul. If poisons or impurities, whether mingled with the food or administered as medicines, are also taken into the system, a bad condition will become worse. Hence the process of purification has a negative as well as a positive side. "Cease to do evil," as well as "learn to do well." Do not take anything into the system which is not in itself wholesome, and promotes the normal action of all the excreting organs.

It is a common notion that boils and running sores are purifying processes. This is true only as it applies to the disorganized structure of the part affected. Ulcers and abscesses have no purifying effect on the mass of blood. It is a serious mistake in "water-cure" practice to apply cold cloths to the skin until the surface is ulcerated, and then continue them to promote suppuration, with the view of cleansing the blood. The effect is just the contrary. It is a drain upon the pure blood. The true healing art does not consist in destroying any normal structure, nor in producing artificial depurating channels, but in purifying the system through the natural channels.

HYGIENIC TREATMENT.

The eruptive fevers, and all rashes attended with feverishness, are to be treated on the plan applicable to simple fevers. Ablutions, tepid or cool, according to the temperature of the body, are the important and essential appliances. If these are managed judiciously, with such nursing as common sense dictates, there will be little difficulty in treating successfully the whole catalogue of febrile skin diseases.

Chronic affections of the skin require a prolonged treatment and a stricter regimen. By referring to what I have said of the causes of skin diseases, the reader will see what to avoid in the matter of dietetic errors. Two things are essential in the dietary—unleavened wheat-meal bread and good fruit. Milk and sugar may be tolerated, in some cases, with no appreciable injury, but they are always better dispensed with. I doubt if any one dietetic error can be named more conducive to bilious humors and erysipelatous eruptions than the free use of sugar. Milk is especially objectionable to those who are liable to constipation. Seasonings of any kind cannot be used too sparingly, while salted meats and shell-fish are inadmissible in all cases.

Bathing should be so managed as to "aid and assist nature" in freeing the skin of its biliary accumulations, and to restore the action of the liver. For persons of vigorous constitutions, and with no deficiency of bodily temperature, the wet-sheet pack, two or three times a week, is the best appliance for "opening the pores" yet discovered. But here I must caution the reader against a prevalent error. Sweating, beyond a moderate extent, is not a cleansing but a debilitating process. The patient, therefore, should never be kept in the pack long enough to induce much sweating. The object in "packing" is to promote circulation in the superficial blood-vessels, and

not to deplete the blood of its serum, or watery part.

For persons of low temperature and feeble circulation the tepid rubbing wet-sheet each other day, or the half-bath at about 85°, alternated with the air-bath or dry rubbing sheet, is preferable to the pack.

Hip-baths can be advantageously employed in all cases. They may be employed once or twice a day, according to the vigor of the patient, and of a temperature ranging from 70° to 90°, according to the bodily temperature. The time may vary from five to thirty minutes. The rule for managing hip-baths in skin diseases is, to avoid any permanent chilliness, or any disagreeable sense of fatigue. Very cold and prolonged hip-baths should never be employed in any form of cutaneous eruption.

The wet-girdle is applicable to all cases where the liver is manifestly enlarged or in a state of chronic inflammation, as will be denoted by fullness and tenderness under the lower ribs of the right side, and pain about the shoulder-blades, or by symptoms of jaundice. It should never be worn constantly, so as to occasion ulcerative inflammation of the skin, but may be worn from three to six hours during the middle part of each day.

When the liver is torpid, fomentations should be employed for ten to twenty minutes twice a week. A flannel cloth wrung out of hot water, and applied to the region of the liver as warm as the patient can bear without injuring the skin, answers all purposes.

While undergoing the curative processes it is of first importance that the patient have sufficient sleep. Here is where the health institutions have one great advantage over home-treatment. Early to bed is there an inexorable rule. And to insure quiet sleep and perfect assimilation, the patient must avoid late suppers. It is better to eat no supper at all—to take the second meal at about 3 P.M., and nothing afterward.

With regard to morbid growths, they can easily be removed by a few touches of nitrate of silver or aquafortis; while parasites of all kinds will cease to trouble the skin after all of its impurities—the offal on which they feed—are removed.

THOUSANDS of barrels of flour annually exported from this country to England return to us in the shape of "fancy" crackers, and of course find ready sale, regardless of their unwholesome character. Can not Americans bake their own crackers?



NEW YORK,
AUGUST, 1872.

PERVERTED.

HERE is Webster's definition of the meaning-full term "Pervert:"

"To turn from truth, propriety, or from its proper purpose; to distort from its true use or end; as, to pervert reason by misdirecting it; to pervert the laws by misinterpreting and misapplying them; to pervert justice; to pervert the meaning of an author; to pervert nature; to pervert truth."

The dictionary-maker might and should have extended his definitions, and included all the faculties and functions of the human mind and body. This, however, we may do for ourselves, now that we know what the word actually means. Let us see who are and who are not perverted. According to the old theology it is made to appear that "in Adam's fall, we sinned all;" and that the race, having been "conceived in sin," must of necessity be "totally depraved." If this be true, then every human being, good, bad, or indifferent, is perverted. We shall not attempt to prove or to disprove questions or problems in theology. That is not our work. Let the white cravats cipher this out while *we* look into the workings of the human mind, as it was constituted before "the fall" or "the flood," and before there were any creeds, schools, or theologies. What do we find? This: that "God created man in His own image," we presume according to design, and just as He wanted him to be; that He gave him all the bones, muscles, nerves

and senses necessary for his use, protection, defense, and perpetuation ; that He also gave him faculties of mind, through the exercise and development of which he is capable of illimitable improvement ; that no change in the general structure has been made since the creation. The number of bones, muscles, and organs of body and brain, the number of hands, feet, fingers, toes, eyes, ears, and even of the hairs of our heads, have not been changed. No faculties have been added, none have been taken away—man stands forth to-day the creature God made, as He made him, and as He designed, intended, and wanted him to be. If not, why not ? But, the objector replies, did God make man a sinner ? We answer, No. He made him man, and provided the wherewith for his support and perpetuation. God gave man an appetite, a desire for food, through which growth and length of life may be attained. But God did not make man *pervert* his appetite, as by drinking alcoholic liquors, or by smoking or chewing tobacco, neither of which practices is healthful. God also gave man affection, the love element, which, when normally exercised, leads only to happiness ; but when *perverted* leads to death and hell. So God also gave us the organ of Acquisitiveness, and a desire to acquire property—the *saving* instinct—that we may provide for future wants ; in summer to lay up for winter, and in youth and middle age to provide for our second childhood, or the period of helplessness. But He did not intend that we should steal, rob, or take from another that which is not ours. Constructiveness, when exercised in the interest of peace, civilization, and the good of man, will be acceptable to Him ; but when inventing “ infernal ” machines with which to destroy human life, may we not call *that* a perversion ? Veneration is for worshiping the true God, not idols or images of wood or

stone, or structures of our own hands, or anything in or under the earth.

Tune may be exercised, in connection with the intellect and moral sentiments, so as to be acceptable to Him ; but when exercised in the singing of bacchanalian songs we may know it is perverted. When Conscientiousness is exercised in the interest of *justice*, it is right ; but when it becomes *ensoriousness*, it is wrong.

When Spirituality leads to faith and makes us prophetic, opening the very portals of heaven to our view, as it were, lighting us on our way through the realms above and beyond, it is in accordance with the will of God ; but when this organ of Spirituality becomes the medium through which ghosts, hobgoblins, witchcraft, and other delusions take possession of our reason and overthrow our religion, then this perverted belief becomes a curse, and in some instances produces insanity.

Hope, in its normal exercise, gives buoyancy, enterprise, joyousness, and sustains in times of trial, misfortune, and in death. But too much of it, or Hope perverted, leads to promising more than we can perform, seeing double, running after phantoms, perpetual motions, and taking stock in impracticable projects, such, for example, as attempting to build railways to the moon. In short, one and all of the organs of body and brain may—often do—become perverted. See what havoc one loose screw will make with the running of a machine ! A single bent or broken cog in a watch stops it, or prevents it from “ keeping good time.” The perversion of a single organ of the brain, like that of Alimentiveness, by strong drink, dethrones the reason, and throws the entire mental machinery out of balance, and the thing zigzags off the track, spoiling all it touches. This is perversion.

A man may have an almost faultless

head and body in all other respects, but this one loose screw ruins his prospects for life. Amateur phrenologists are liable to be misled by these well-formed heads with *perverted* minds, and to mis-judge; while they will sometimes find heads much less fortunately developed whose owners live useful, high, and even holy lives. These are true to the normal action of their higher sentiments. They seek to live godly lives, and to subdue the flesh to the spirit—to subordinate *self* to the good of others—and, in time, they become children of light, growing in grace, and are guided as by a lamp hung in the heavens. Reader, where do *you* stand? Are you living a true and godly life? Or, are you perverted? You can examine yourself. What are your habits? What are your objects in life? Are you “running down at the heel,” physically, intellectually, or morally? Is your appetite healthy? or do you crave narcotics, stimulants, and condiments? Look out! Sin is punished. “God is not mocked.” Put your hand in the fire and it will suffer. Abuse your body in any way, you must, sooner or later, pay the penalty. If you lie, steal, or commit violence on your moral character, a *scar* will appear and report the truth. So true as there is such a law as “cause and effect,” so certainly must we pay the penalty of violated law. Excuses of ignorance for going to sea in a rotten ship, or with a drunken captain or pilot, will not save us from going down if we strike a rock, or blindly run into an iceberg.

You have faculties which you are bound to educate and to use. Are you ambitious to get riches? Than a mean, miserly, sordid soul, nothing is farther from happiness or heaven! Are your affections “running riot” with your reason? Remember the fate of her who “loved, not wisely, but too well,” and look out! Lust is perverted love. What

of your temper? Do you “fly in a passion” on the slightest occasion? This is your weakness and your danger. You may say that which you will regret to the latest hour of your life. You may do what you can never undo. Your hasty and violent temper *must* be subdued. Say your prayers over it. Ask God’s assistance. Humble yourself by asking pardon every time you offend, and, in time, you will have strength to “put on the mental breaks” when necessary. Penitence brings pardon; and our only hope for becoming self-regulating and self-controlling, so as to escape the curse of perversion, is by subordinating the lower nature to the higher, or the flesh to the spirit, and of living strictly in accordance with God’s ordinances.

ARE THEY RIGHT?

AT a convention of Young Men’s Christian Associations, held in Lowell, Massachusetts, it is said a new “plank” was put into their platform. That plank was simply this, that, to be qualified for membership, one must be a temperance man, and that he must not chew, snuff, or smoke tobacco. In other words, that the habitual use of stimulants and narcotics was incompatible with the highest type of a Christian, and that members of a Y. M. C. Association should not use them.

At the late Methodist Conference held in Brooklyn, New York, the same questions were discussed, and, if we are not in error, the general sentiment among the bishops and the clergy was largely in favor of strict temperance principles, and the disuse of tobacco. Now, we repeat the question, “Are they right?” We will not argue, but leave the matter for each to decide for himself. To one walking or riding out on Sunday—except to church—would be sin, while smoking, chewing, and drinking, even to

his bodily injury, would not be acknowledged as a sin. People differ very widely as to what is sin. One makes sin something related entirely to the moral or spiritual conditions, such as lying, swearing, slandering, stealing, and so forth, but refuse to count drunkenness—by liquor or tobacco—as in any way sinful. Some think it sinful to race horses on a wager, to shoot pigeons for sport or on a wager, or to gamble in any way, though it be for religious or church purposes. Now, *we* define sin to be, *doing wrong, knowingly*, whether it be *against the body, the soul, or the spirit*. Flogging a child unmercifully, getting angry, scolding, disturbing a neighbor, causing strife, or making mischief generally come under the charge of sinning. It is wrong to do any of these things, and we all know it. If the tobacco-user, the whisky-drinker, the horse-racer—for sport or for money—or the pigeon-shooter—from traps—or the gambler can solemnly ask God's blessing on the one or the other of these things, the responsibility will be with him. If he cannot ask a blessing on them, he may *not* do them. We do not know a better rule by which to be governed. It will apply to all the acts of life; to the choice of pursuits, and in pursuing them; to all our habits, and to the regulation of our conduct in society and in private.

We rejoice that religious men in the churches and out of them have so far progressed that they are prepared to consider the unphysiological habits of themselves and others as affecting their morals; that they realize the fact, which we have taught for years, that a pure, clean spirit cannot dwell in an impure or unclean body; that the food we eat and the liquids we drink affect our minds and our morals, as well as the health of our bodies. And we proclaim that *they are right*. We may not always feel at liberty to decline the services of a person

because he smokes, chews, or drinks; but he would be far more acceptable if he were free from these habits. We may be compelled to place persons in public offices, by our vote, who are addicted to such habits, but we should much prefer those who do not indulge in them. It is certainly no recommendation of a person to say that he smokes, chews, or drinks. It would be to his credit to say that he did neither.

In choosing employes, in electing officers, or in choosing partners for life, we should be very much inclined to make temperate habits one of the conditions to the contract. We would not trust a man who could not trust himself. If one gives way to a perverted appetite, and loses his self-control, as many of our public officers are known to do, through wine-drinking, why should we trust them? Indeed, that fact is a sufficient reason for us to displace them by sober men who can trust themselves, and whom we can trust.

If politicians object to our bringing temperance principles into politics, this is our answer: *You* have tried to navigate the ship of state for some time in *your* way, and it is evident that you have blundered by putting drunkards at the helm. We are not aware that the selecting of employes is yours by divine right, or by any other right except that of numbers; and *we* propose to try *our* hands at selecting. We shall exchange your drunkards for sober men, and we think that an improvement. If you don't like it, neither do we like *your* choice. Sober men we are bound to select when we can. If you prefer smoking, chewing, and whisky-guzzling fellows, you may vote for them. We beg to be excused.

The churches are with us, or should be. The best citizens—men and women—are with us, or should be, and we shall do the best we can in the interest of

temperance, intelligence, prosperity, and good government; and we can ask God's blessing on our endeavors.

PREJUDICE.

AN agent handed a prospectus of the PHRENOLOGICAL JOURNAL to a farmer, and asked him to subscribe. After looking it over a few moments the latter consented, remarking that he believed in the general principles of the science, but that he did not understand its details well enough to be sure of their correctness. He wished to know more, and, to this end, would take the JOURNAL. The agent received his subscription and inclosed the same to this office, and the return post brought No. 1, Vol. 55, July number, to the subscriber. Imagine the agent's surprise, on meeting his subscriber, to be informed that, although he had paid for it, he would not take the JOURNAL out of the post-office. The agent inquired why not? Because, said this subscriber, I have heard that the JOURNAL published the head of Horace Greeley! Well, what objection have you to this? The JOURNAL publishes all the candidates and their platforms. It is not a party organ, but deems it right and proper to exhibit to its readers men of all parties, all creeds, and of all religions. "Ah, yes," said the subscriber, "that is all very well; but *I will never forgive the man who bailed Jeff Davis!*"

"Prejudice, prejudice!" exclaimed the agent. "Why not allow that one has as good a right to his opinion as another? Mr. Greeley simply did what the law authorized, and believed he was doing right." The subscriber remained unyielding, and we lost a reader.

Other similar instances of *prejudice* have occurred in our experience as publishers. We undertook to publish portraits and biographies, with the creeds of all our leading clergymen, in this JOURNAL, simply as a matter of information, by which readers could see wherein the different religious parties agreed and wherein they differed. We began with the Presbyterian, following with the Baptist, Methodist, Episcopalian, and so on through the list, including Jews, Roman

Catholics, Mormons, Shakers, Quakers, etc. There was not the slightest partiality exhibited. We took, in each case, twelve of the representative men of each church, and showed them up. These publications were generally greeted with hearty thanks, but there were exceptions. One wrote us, on meeting a group of Methodists, that we must stop his JOURNAL; he would not have a publication in his house that spoke well of a "roaring or shouting Methodist." Another would not have the JOURNAL because it published a Jew. And when we printed the Mormons, it was simply "Dreadful!" "How could we open the JOURNAL to such wickedness?" And so it goes. We get curses from one and coppers from another, while knowledge is disseminated, and prejudice, whose parent is ignorance, is dissipated. Broad, liberal, and generous minds can look at all sides of all subjects, and learn something from everything they see. Narrow, bigoted, and prejudiced ones see things through colored glasses, blue, green, red, etc., and their theology is colored by their education—or their want of it. Experience will teach us that our religious creeds, and our particular modes of worship, are chiefly matters of education. Mankind are cast in different molds—circumstances—and we may not hope either to look or to think precisely alike. Man is a free moral agent, and, under limitations, may do as he pleases; *i. e.*, when he pleases to do right. It is his privilege to improve, and his duty to outgrow low, mean, and miserable prejudice.

POLITICAL.—The prospect, at this writing, seems favorable for the nomination of Mr. Greeley by the Democratic party in convention assembled at Baltimore. The recent movements on the part of Democrats whose influence is potent impress us that no other "available" man is strong enough for their purpose in meeting the re-nomination of Gen. Grant. In the case of Mr. Greeley's acceptance at Baltimore, we shall in the next number present our readers the portraits and biographical outlines of the gentlemen selected by the National Temperance Convention which was held in Columbus, Ohio, in February last, as proper candidates for the office of President and Vice-President respectively. These gentlemen are, James Black, of Pennsylvania, and John Russell, of Michigan.

Department of Literature, Science, Education.

PRISON REFORM.

BY THE REV. W. AUGUSTUS CARVER.

BRO. EDITOR—Having read and meditated upon an article in the April number of the *PIRENOLOGICAL*, coming as "A Voice from Prison," I have concluded that there is indeed a demand for a reform in prison life. From the said article I do not hold that there is *less* justice in Northern courts than in any other—for there is little enough everywhere—but it is a very lamentable fact that, through disguised forgery, innocent persons very often find their way to the dismal cell, to muse upon the imperfections in the administration of justice. I do not hold that the writer was innocent of any misdemeanor, and hence sought this means of enlisting in his behalf the public sympathy.

But it is not my purpose here to satirize the acts of law-makers, much less to take up the cause of any individual. What I have to say is concerning the adherence to Scriptural truths, in the present mode of conducting prisons, and county jails. It is true that "city missionaries" preach the word of God frequently to these poor unfortunates; distribute, when practicable, a few tracts, and converse occasionally with them; but this is not sufficient, not what is demanded in Scripture; we want something more. Now, what is that something? Our brother convict tells us, "he asked a permit from the warden to have some blank books to learn the theory of book-keeping," and his reply was, "he knew as much as his warden did."

Before investigating this request, let me ask what the object of imprisonment is? Have the enlightened American people, of the afternoon of the nineteenth century, become so blinded to its true import, by ungenerous revenge—deepened and strengthened by their own human inclinations—that they have lost sight entirely of Bible teaching, such as "*love* thine enemy," and above all "*do good* to them that persecute and despitefully use you?" Men harp on punishment; and tenaciously hold on to the old time exhortation, "*spare not* the rod." They forget that they are to practice forgiveness, and to show mercy; but if a few green-backs can be pocketed, a verdict of Guilty can easily be procured, in the very face of *stern justice*.

They do not realize that in justice there should be much mercy, and that prisoners have the *benefits* of doubts; but if there are any the public claim them as *just* cause for swinging in the noose, or wasting a lifetime in the stygian darkness of an underground cell. But our writer says he was denied facilities for learning so that when he should be released he might not have to resort to begging for a living, but could commence at once to *earn* it honestly. When a repentant "voice" is heard from the gloomy prison, and when a *convict* must dictate the necessity of prison reform, it is justly time for us to think at least and contrive if possible some means by which these many lives may not be misspent.

Do convicts ask for facilities for learning? Why deny them? Do they wish to improve the confinement, that they acknowledge "they so justly deserve?" Why prohibit it? A life of confinement with *nothing* to do!

I appeal to every sane man or woman in Christendom. How many of you could sit for a month or even a week in your own home, and do nothing at all—with the privilege, even, of going out when you pleased? Not a response. And very reasonably none, since it is not a part of human nature to be idle, in the strict sense. The laziest man in existence *could* not do it if he would. Then how are we to expect prisoners to do so any more than we? Just think of a term of from one up to ten, fifteen, or twenty years, or perhaps a *lifetime*. Does this set an example for others? Is it fulfilling the design intended by improving others? Look about you for your answer, and be convinced.

That "something" which is needed in prison reform I claim to be an occupation of the time spent there by the prisoner. His mind, and morals, and physical being are just as susceptible of further development as is the reader's; but by keeping them in confinement without occupation will never do it; and the public will have to pay just as much for keeping them as they have always done, and doubtless more.

But with this reform vastly more will come out better men than when they entered, and, most glorious of all, vastly fewer will be taken

from the hand-cuff and ankle-chain to the grave. But I hear some one saying, our penitentiaries have a system, and a grand one too, of strenuous labor which every convict is compelled to perform. I answer, "the Lord is to be praised for this institution." It is a grand idea, and a profitable one too. But, how many penitentiaries have we in comparison with our city and county jails? And how many inmates of the former are there in comparison with the startling multitudes of the latter? It is in these places we want reform; it is here the prisoner might *learn* what he never before, perhaps, had an opportunity of learning. In this way, enlightened American, you are to "do good to them that persecute and despitefully use you." Let your love for your fellow-man procure a way for his escape from evil, and when he is caught at it, do not, I beseech you, cut off *all* hopes of

his reform by securing for him only an idle and worse than vagrant life.

Let the rays of intelligence that beam around us light up the repellant gloom of the cell, cheer the convict in his misfortune, and induce him to higher, holier efforts for his eternal welfare. Out of prison have come as bright genius and noble minds as ever graced the outside walls of the dusky prison. One among this vast number, outshining all others, and of itself sufficient illustration, is John Bunyan. Who has not read with delight his "Pilgrim's Progress," feeling thankful to God for such a gem of truth? Who does not rejoice that even the prison is susceptible of such grand results? Shall I mention Milton, Baxter, and others? No! enough has already been said, and we have only to add the well-worn expression, "A word to the wise," etc.

WHAT ARE COMETS?

MAN is an inquiring being. He peers into illimitable space, discovers and understands what he can—which, with his finite view, is but little—and then, led onward by that natural desire to know more of the hidden mysteries of the grand universe, wanders off into the realms of speculation. Speculation, however, often leads to the discovery of important truths. Columbus assumed as a hypothesis that the world was round. Acting upon that assumption, the discovery of the continent of America followed, and in course of time the rotundity of the earth proved. Astronomers speculated that owing to certain disturbances occurring to the planet Uranus in his periodical revolutions there must be another planet still beyond him. Leverrier and Adams each made calculations, and fixed the point in the heavens where that planet ought to be discovered. Dr. Galle, of Berlin, directing his telescope to the quarter of the heavens indicated, discovered the planet Neptune at the immense distance of 2,862,000,000 miles from the sun, the center of our system.

Some speculations are received as truths, because no others relating to the same objects are tenable. The fixed stars, for instance, are regarded as suns to other systems of planets which revolve around them. Any other hypothesis does not seem reasonable. They are at such immense distances that they must be bodies of equal, and many of them of greater magnitude than our sun. They must shine with their own light, for any borrowed light,

even did they possess the reflecting power of the dazzling diamond, would be lost in the vast void long before it could reach us. Could we take the distance of Sirius, for instance—one of the nearest of the fixed stars—and make every thousand miles of his distance a single inch only, he would yet be 815,656½ miles from us, considerably more than the distance to our moon. The mind becomes bewildered in attempting to conceive such a distance; yet some of the stars whose annual parallaxes have been determined, and whose distances have been computed, are three times as distant as Sirius; and many others which make no perceivable parallax, and whose distances cannot be computed, must be many times more remote than they, and yet we can plainly perceive them by the naked eye.

Assuming, then, that the fixed stars are suns, and have systems of worlds revolving around them as we have about ours, I shall proceed to make some speculations, and shall endeavor to present with them some corroborative evidences that will make them appear, not only possible, but highly probable, hoping that those who have made the science of Astronomy a particular study will bring forward all the facts they can, either to prove or disprove their plausibility.

First.—Upon the hypothesis that all the fixed stars are centers of solar systems similar to ours, I assume that a constant interchange of matter is taking place among all the solar systems of the universe. To make such an as-

sumption seems plausible; I shall make other assumptions that cannot, I think, be deemed absurd or improbable.

Second.—I assume that each planet which revolves around the sun is gradually enlarging its orbit; that this enlargement is so gradual that several hundred thousands of years may elapse before the earth increases her distance from the sun a single million of miles; that as she gets farther away, the centripetal force grows weaker, while the centrifugal, although decreasing, does not decrease in like ratio; therefore she increases her distance from the sun at each revolution a very small fraction more than she did the preceding one.

"Ah! but here we have you," says one. "Do not philosophers all agree that the centrifugal and centripetal forces are equal?"

They do, I believe; but has it ever been proved? Is not that a mere speculation? If the earth's centrifugal force exactly counterbalanced the centripetal, would not the earth's orbit around the sun be a perfect circle? but do not philosophers all agree that the orbit of the earth is elliptical—that she is some millions of miles nearer the sun at one point of her orbit than at another? Taking this fact into consideration, is not the assumption that the centrifugal force exceeds the centripetal, as plausible as the one that they are equal?

"But," says the objector, "if the centrifugal force exceeds the centripetal, and the earth enlarges her orbit every revolution, would not our years grow longer, and would not this have been perceived by astronomers?"

Our years would grow longer, of course, yet this increase may be so extremely small that it may have been overlooked by astronomers, or, if perceived, attributed to some irregularity of the earth's motion in her orbit, produced by the attraction of the other planets. Suppose, for instance, that the earth increased her orbit only one mile every revolution, then the increase in the length of a year would be about one-nineteenth of a second, and it would require 1,140 years for our year to increase one minute in length; and when we consider the infinity of time, the immutability of God's laws, and assume the indestructibility of matter, we can readily understand how, even were the increase of orbit a single yard only, instead of a mile, that at some period in our far future our earth would be as remote from the sun as our most distant planets are now.

Third.—I assume, that as a planet recedes from the sun his cohesive attraction becomes less. The planet increases in size and de-

creases in density. Astronomers agree that Mercury, the nearest to the sun, is the densest of all planets; Venus, the next in order, less dense than Mercury; the Earth less dense than Venus, and so on with each planet, in proportion as its distance from the sun increases, its density decreases, until when we come to Neptune, which we find almost, if not entirely, in a gaseous state.

As a corollary to the above assumptions, a planet must, in a long period of time, so far recede from the sun that it would fall without his sphere of attraction into the sphere of that of some neighboring sun. We will take Neptune for example, the most remote planet of our system with which we are acquainted: Neptune is now, as near as astronomers can compute, at the immense distance of 2,862 millions of miles from the sun. Double this number, and multiply it by 3.1416, and we have nearly the distance he has to travel to make one revolution around the sun; therefore we do not feel surprised when we learn that it takes him 164½ of our years to complete one of his grand revolutions; but in his present situation, according to our theory, he must in each revolution very materially increase his distance from the sun; for, in addition to the assumed excess of centrifugal force, he is acted upon by the attraction of surrounding suns.

A dozen more revolutions, we will say, and his orbit exceeds by many trillions of miles his present one, and as he circles around he trembles between the conflicting attraction of our sun and some other. Again he goes upon one of his sublime revolutions, still increasing his distance from our luminary as he circles onward. Again he comes around, and this time strikes deep into the other sun's sphere of attraction, and is whirled away toward it.

The centrifugal force that kept him circling so long about our luminary still clings to him to some extent, and prevents him from going directly into the body of the other luminary; yet he passes close about it. The path that he makes in the final part of his last revolution around our sun, and the path he describes in approaching the other luminary, would be somewhat like the bends described by the letter S, according to the laws of resultant motion, only not so much curved.

We will say that the other luminary is Sirius. As Neptune whirls around Sirius with greatly augmented centripetal force, his centrifugal is likewise augmented, exceeding the centripetal, and he is cast off again far into space, almost at right angles with the line of his approach.

His exceedingly attenuated nature now causes him to have an immense tail, composed of the lighter gases streaming far behind him, while the heavier elements, now also resolved into gases, remain united more closely, forming the bright nucleus which we see in all our comets. Neptune, then, has left our system, and bursts in upon Sirius, startling and alarming the worlds through which he passes.

"A bright deformity on high,
The monster of the upper sky."

But does he always remain a comet? No; our hypothesis shows us that, as the centrifugal exceeds in a slight degree the centripetal, that at each revolution, whether it be in 50 or 500 years, his distance from Sirius would become greater in perihelion, and less in aphelion, than in the preceding one, until, after the lapse of myriads of ages, he once more settles down into an orbit as near a circle as the excess of centrifugal force will allow. His elements once more unite, forming various compounds more or less dense, according to his nearness to the great solar alembic, whose chemical action aids in the combination. All the original elements are there and indestructible. It is old Neptune still. He has passed from one system to another, and is a planet again. He has to undergo various transitions, and be peopled by many different orders of beings, before he becomes a comet again.

While he has changed from our system to another, some other planet as a comet has sought ours; and so the interchange goes on. Our earth of to-day may be on a grand journey among the different luminaries that compose our universe—a journey that is as infinite and unending as time.

If our story be true, what a number of little comets will our nearest luminaries be deluged with when the asteroids shall stray beyond the pale of the sun's attraction; and how will great Jupiter create consternation in some neighboring system, as great comets have in past ages created consternation in ours; and may we not suppose that by the time Jupiter shall leave us, millions of ages hence perhaps, the great comet of 1680, or some other, will have settled down into a planet so that no vacancy may occur? God is great and good, and order and harmony are to be seen in all his works, from the grandest to the most insignificant; and a speculation in regard to the plan of the universe that is not harmonious, and fixed according to some immutable laws, must of itself fall to the ground. My theory may be easily proved untenable perhaps by the scientific astronomer; yet if it is, it may lead to further speculation, and so truth be elicited at last, which we are all searching after. With this end in view, I have presented it briefly leaving out much that would tend to make it appear more plausible. R. A. RILEY.

ON KNOWLEDGE.

ONE of the commonest quotations in the English language is the well-known maxim of Lord Bacon, "Knowledge is power." The idea was not original with the great philosopher; it is simply a condensation of the thought contained in the Psalms of David, "A wise man is strong; yea, a man of knowledge increaseth strength." It expresses tersely and forcibly in three short words what is self-evident to the most casual observer of what is going on around him. It was probably not original even with David, but an idea that must needs have occurred to some of the earliest of our race.

The words "wisdom" and "knowledge" are generally used as identical in meaning; and we find the psalmist using the phrases—"a wise man" and "a man of knowledge" in the same sense. Strictly speaking, however, the two words have different meanings. Knowledge, in its restricted sense, is the mere percep-

tion of facts; wisdom is the wise use of them. But, taking knowledge in its broadest and most comprehensive sense, let us examine it carefully and see what it is.

The chemist, by analyzing a drop of water, is enabled to discover the two gases of which it is composed; and once knowing its component parts he is able to produce water itself by combining them. In like manner we can analyze knowledge, so to speak, and find out of what it consists, and how it can be acquired. Everything that we have learned, whether from books or from experience—all knowledge whatsoever—is either science or art. These two divisions cover the whole field of human inquiry. The province of science is to know what effects will ensue, if certain causes are brought into operation. The province of art is to bring these causes into operation. Take, for example, the common lucifer match, that luxury which our fathers knew not, but which

is now so common that we can buy a handful for a cent. Let us see how science and art have combined to produce it, and abolished for ever the cumbersome "flint and steel," the "phosphorus box," and other obsolete contrivances for obtaining light. The train of thought, followed by the inventor of the match, was probably this: "I want some substance that will ignite by friction; a preparation of phosphorus will do this, but it burns at so low a temperature that it fails to ignite the wood on which it is placed. Now, if I put some sulphur next the phosphorus, the sulphur will take fire and burn, and in its turn ignite the wood." This is the preliminary part science plays in making the match. Nothing has actually been accomplished as yet. The idea has simply been thought out.

Art now steps in, and puts the idea into execution. And the more skill, and the more art, there are displayed in carrying out the idea, the better and cheaper the match.

In this case, science has predicted certain events under certain conditions—art causes these conditions to be fulfilled, and the events inevitably occur.

As to the means of acquiring knowledge, there are two methods to be followed, and only two—the inductive method and the deductive method. By the inductive method we reason from particular facts to general ones: as—I find that I was born with two hands and two feet, and I, therefore, infer that every man is born with two hands and two feet. The deductive method is the reverse of this. These two ways of arriving at truth are known under various names. The first has been called the *a priori* method, the reasoning from cause to effect, from facts to ideas, etc., etc. The second has been called the *a posteriori* method, the reasoning from effect to cause, from ideas to facts, the syllogistic or logical method, etc., etc.

It is hard to say which of the two methods is of the most importance. Great discoveries have been made by each; and very often we can arrive at the same result by following them both.

Suppose a life insurance company wishes to ascertain whether a man employed as laborer in a gunpowder factory should be charged more for a policy on his life than a farm laborer. By turning to the census tables of mortality, it would be found that the average length of life among farmers is much greater than among makers of gunpowder, and the company would, therefore, decide that the latter

class should pay a higher premium. This would be the inductive method.

Now, the same conclusion may be reached by the deductive method, which would be to reason in this way, A man working on a farm leads a quiet, peaceful life, exposed to few dangers, running no risks; whereas one employed in a powder factory is liable at any moment to be blown to atoms. He is, therefore, less likely to live to old age than a farmer, and should, on that account, pay more for his policy.

It was by the inductive method that Franklin discovered the identity of lightning and electricity—that is, by the experiment of the kite. It was by the deductive method that he invented the lightning-rod—that is, he revolved the subject in his mind, and deduced from his knowledge of electricity the idea that a building could be protected by being furnished with a conductor to convey the electricity to the ground.

Both these modes of investigating truth are of great antiquity; but it was not until comparatively modern times that the inductive method came into common use. It is to Lord Bacon, who was born about the middle of the sixteenth century, that we are indebted for its general adoption. Before his time mankind relied almost entirely upon the old method of reasoning—the *logic* of the old philosophers—of which the *sylogism* is the common form. As, for example, all men are mortal. Plato is a man—therefore, Plato is mortal.

The inductive is now the method usually employed by scientific men; and by it many, perhaps most of the discoveries which have immortalized the present century, have been made. The spirit of the age teaches us to rely on what has been happily termed "the inexorable logic of facts."

A TRUE MARRIAGE.

THEODORE PARKER wrote thus sensibly on the marriage question:

Men and women, and especially young people, do not know that it takes years to marry completely two hearts, even of the most loving and well-assorted. But nature allows no sudden change. We slope very gradually from the cradle to the summit of life. Marriage is gradual, a fraction of us at a time. A happy wedlock is a long falling in love. I know young persons think love belongs only to the brown hair, and plump, round, crimson cheeks.

So it does for its beginning, just as Mt. Washington begins at Boston Bay. But the golden marriage is a part of love which the bridal day knows nothing of. Youth is the tassel and silken flower of love, age is the full corn, ripe and solid in the ear. Beautiful is the morning of love, with its prophetic crimson, violet, purple, and gold, with its hopes of days that are to come. Beautiful also is the evening of love, with its glad remembrances, and its rainbow side turned toward heaven as well as earth. Young people marry their opposite in temper and general character, and such a marriage is commonly a good match. They do it instinctively. The young man does not say, "My black eyes require to be wed with blue, and my over vehements require to be a little modified with somewhat of dullness and reserve." When these opposites come together to be wed, they do not know it; each thinks the other just like itself.

Old people never marry their opposites; they marry their similars, and from calculation. Each of these two arrangements is very proper. In their long journey these two young opposites will fall out by the way a great many times and both get out of the road; but each will charm the other back again, and by-and-by they will be agreed as to the place they will go to and the road they will go by, and become reconciled. The man will be nobler and larger for being associated with so much humanity unlike himself, and she will be a nobler woman

for having manhood beside her that seeks to correct her deficiencies and supply her with what she lacks, if the diversity be not too great, and there be real piety and love in their hearts to begin with. The old bridegroom, having a much shorter journey to make, must associate himself with one like himself. Men and women are married fractionally; now a small fraction, then a large fraction. Very few are married totally, and they only, I think, after some forty or fifty years of gradual approach and experiment. Such a large and sweet fruit is a complete marriage that it needs a very long summer to ripen in, and then a long winter to mellow and season it. But a real, happy marriage of love and judgment between a noble man and woman is one of the things so very handsome that if the sun were, as the Greek poets fabled, a god, he might stop the world in order to feast his eyes on such a spectacle.

[Mr. Parker was right. "Variety is the spice of life," and different temperaments, in early marriages, should unite, the blonde with the brunette, so that any excess or deficiency in the one may be corrected in the other. Those who marry under thirty may hope so to blend their natures and so assimilate as to become one in spirit and disposition ere they reach old age; while those who marry late in life—simply for companionship—will find it more compatible to unite with similars in temperament, in religion, and in general disposition. There will be little assimilation after fifty years of age.]

THE PRE-ADAMITES AGAIN.

MR. EDITOR—We think that many will concede that in our first article, in your February number, we fairly dug out the long-lost Pre-Adamites from the company of beasts. Gen. i. 24, "And God said, Let the earth bring forth the *Living Creature, after his kind*," where they have been kept by the recognized learned men of the world, notwithstanding St. Paul so clearly presented them to the Romans near two thousand years since. Doubtless there are many still who, by the force of education and from an indisposition to examine for themselves, will still keep them there, though in doing so they ignore the references to them by Moses, Isaiah, Jeremiah, Ezekiel, Christ, Paul, and set aside the whole of Bible history as well as profane history, and thus create a greater mystery than the ideas we have heretofore presented. Perhaps by more fully presenting some new points and evidences we may get our an-

cient sires into better company. We expect, and hope for the sake of truth, to be severely criticised for daring to grapple with errors that have poisoned the fountains of knowledge and shrouded the world in ignorance of matters vital to the best interests of man, thus limiting the progress of Christianity and keeping us, in regard to a knowledge of mankind, back of the days of Isaiah.

Let us consider some passages from the prophets: Isaiah xlii. 1, 5, "Behold my servant, whom I uphold; mine elect in whom my soul delighteth; I have put my spirit upon him; he shall bring forth judgment to the Gentiles. Thus said God the Lord, he that created the heavens, and stretched them out, he that spread forth the earth, and that which cometh out of it; he that giveth breath unto the people upon it, and spirit to them that walk therein." Also chap. xlix. 6, "And he said, It is a light thing

that thou shouldest be my servant to raise up the tribes of Jacob, and to restore the preserved of Israel; I will also give thee for a light to the Gentiles, that thou mayest be my salvation unto the end of the earth."

Jeremiah v. 15, "I will bring a nation upon you from far, O house of Israel, saith the Lord: it is a mighty nation, it is an ancient nation, a nation whose language thou knowest not, neither understandest what they say."

Chap. ix. 16, "I will scatter them also among the heathen whom neither they nor their fathers have known, and I will send a sword after them, till I have consumed them."

Chap. x. 25, "Pour out thy fury upon the heathen that know thee not, and upon the families that call not on thy name; for they have eaten up Jacob, and devoured him, and consumed him, and have made his habitation desolate."

Chap. xv. 14, "And I will make thee to pass with thine enemies into a land which thou knowest not, for a fire is kindled in mine anger which shall burn upon you."

Chap. xvi. 18, "Therefore will I cast you out of this land into a land that ye know not, neither ye nor your fathers; and there shall ye serve other gods day and night; where I will not show you favor."

Chap. xvii. 4, "And thou, even thyself, shalt discontinue from thine heritage that I gave thee; and I will cause thee to serve thine enemies in the land which thou knowest not; for ye have kindled a fire in mine anger, which shall burn forever."

Turning again to Gen. i. 24, "Let the earth bring forth the living creature, after his kind."

This command of the earth produced Pre-Adamite man, who was necessarily possessed of all that Adam was, physically, mentally, and capable of becoming morally. (Genesis, ii. 7.) This air that God breathed into Adam's nostrils has been construed to refer to an "immortal soul;" but clearly it was only the common atmosphere essential to all animal life (Isaiah, xlii. 5), and perfected the history of his creation.

Had Adam in his nature been any different, physically, psychologically, or mentally, or stood in any different relation to God and his laws, he would have been commanded to increase "from his kind;" but he and the Pre-Adamites were left free to their natural instincts to love and intermarry. Hence, they married and became one flesh (Gen. ii. 24), and shared in all that was in common to humanity on earth or in heaven.

Gen. i. 26, "And God said, Let us make man in our image, after our likeness." 27, "So God created man in his own image, in the image of God created he him, male and female created he them." This *image* consisted in the human form Christ assumed, as the first-born of every creature, before he created the world; and the fact that the image, or human form, was made male and female, shows to what the word image applies, viz., the physical nature of man with a human soul, the same that Christ, as a man, had—only that His soul was essentially immortal (1 Tim. vi. 16).

As to what constituted the likeness of Adam's soul, the Bible clearly expresses it as follows (Gen. ii. 17): "But of the tree of knowledge of good and evil, thou shalt not eat of it; for in the day that thou eatest thereof thou shalt surely die."

Chap. iii. 4, "And the serpent said unto the woman, Ye shall not surely die." 5, "For God doth know that in the day ye eat thereof, then your eyes shall be opened and ye shall be as gods [Christ] knowing good and evil."

6, "And when the woman saw that the tree was good for food, and that it was pleasant to the eyes, and a tree to be desired to make one wise; she took of the fruit thereof, and did eat; and gave also unto her husband with her, and he did eat." 7, "And the eyes of them both were opened, and they knew that they were naked." 22, "And the Lord God said, Behold the man is become as one of us, to know good and evil; and now lest he put forth his hand, and take also of the tree of life, and eat, and live forever." The Lord drove him from the garden, and guarded the tree of life from being partaken of.

1. Cor. xv. 45. 1, Adam a living *soul*; 2, Adam a quickening *spirit*. 1, Natural; 2, Spiritual.

John iii. 6, 7, "That which is born of the flesh [man with a human soul] is flesh; and that which is born of the spirit [Christ's divine nature] is spirit." 7, "Marvel not that I said unto thee: Ye must be born again" [of the spirit]. Thus we see what the human soul is by *nature*, and what it must become to be *immortal*—another birth into spiritual life, the soul preserving its present human form, spiritualized by Christ.

We thus see from the record wherein Adam differed from former races—in his soul-nature. He was endowed with the *knowledge* of his maker and the laws of his being. Such knowledge formed no part of that physical nature by which alone, through human pro-

creation, souls come into being. Souls are born in infancy and ignorance, and become intelligent through the senses of seeing, hearing, etc. True, Adam was made conscious at his creation of the Author of his being, unlike the former races, that were without that knowledge of God and the promises of hope in Christ. But Adam was created to make known to those before him the knowledge imparted to him.

(Gen. ii. 17.) God commanded Adam not to violate his command. (iii. 6.) Eve saw the fruit was tempting to the eyes and mind, and listened to Satan's words, and was overcome; (7) and their eyes were opened and their consciences awakened; (8) and they heard the voice of God in the garden and were afraid of his presence, because their intelligent souls were conscious of sin, and they had come to know good and evil (22). We thus get at the great distinguishing feature between the soul of Adam and former races, which consisted in knowledge (Col. iii. 10; 2 Peter i. 8; 1 Tim. ii. 4).

As yet, neither were immortal (Gal. iii. 22); and this knowledge was transmissible only through education and not by human procreation. The natural life of the human being comes unconsciously (Rom. viii. 20), while knowledge is received by the human soul by education, both from human and spiritual sources. (1 John iii. 8), Satan, who was a liar from the beginning, and whose works Christ came to destroy (Heb. ii. 14), falsely proclaimed the natural immortality Adam, (Gen. iii. "Ye shall not surely die;") and, transforming himself into an angel of light, deceived the heathen nations, whose views Christians have adopted. (Gen. ii. 17.) "Thou shalt surely die," is expressive of the great fact that all are naturally mortal, but capable of becoming immortal; hence, the offer of a gift of that which nature has not (1 Tim. vi. 16), as the costliest price of faith in him as a Saviour (1 John iv. 9).

John x. 10, "I am come that they might have life and that they might have it more abundantly." 1 John v. 12, "He that hath the son, hath life; and he that hath not the son of God, hath not life." Gal. iii. 8, "And the scripture, foreseeing that God would justify the heathen through faith, preached before the Gospel unto Abraham, saying, In thee shall all nations be blessed."

Now, what is the life here spoken of? Is it not extraneous to man, yet for man? Does it not equally apply to Pre-Adamites, showing they were possessed of all the essential ele-

ments of Adamites? 1 Cor. xii. 13, "For by one Spirit are we all baptized into one body, whether we be Jews or Gentiles, whether we be bond or free; and have been all made to drink into one Spirit." Eph. iii. 5, 6, "Which in other ages was not made known unto the sons of men, as it is now revealed unto his holy apostles and prophets by the Spirit." Eph. iv. 5, "One Lord, one faith, one baptism." John vi. 51, "I am the living bread which came down from heaven: if any man eat of this bread, he shall live forever; and the bread that I shall give is my flesh, which I will give for the life of the world." John iii. 15, "That whosoever believeth in him should not perish, but have eternal life."

We have thus fairly shown the existence, history, and nature of Pre-Adamites and their relations to God and a common brotherhood, all united as one body through Adam and Christ, though from and of different races, nations, and tongues. Also, that the Jews and their fathers were ignorant of many ancient and distant nations of different tongues, among whom the Jews were sent as a punishment and to educate them in the knowledge of God. How far such ignorance may have entered into the history of the flood, seeming to teach the flood universal, instead of limited to Adam's descendants, cannot be determined; but it is clear, from the references by Paul to other nations, and also from the evidences found among nationalities of diverse tongues and races, that the flood was limited. See Joshua xxiv. 2, "And Joshua said unto all the people, thus saith the Lord God of Israel, your fathers dwelt on the other side of the flood in old time, even Terah, the father of Abraham, and the father of Nachor: and they served other gods."

8, "And I took your father Abraham from the other side of the flood, and led him throughout all the land of Canaan, and multiplied his seed, and gave him Isaac."

14, "Now therefore fear the Lord, and serve him in sincerity and in truth; and put away the gods which your fathers served on the other side of the flood, and in Egypt; and serve ye the Lord."

15, "And if it seem evil unto you to serve the Lord, choose you this day whom ye will serve, whether the gods which your fathers served that were on the other side of the flood, or the gods of the Amorites in whose land ye dwell: but as for me and my house, we will serve the Lord."

Gen. xi. 28, "And Haran died before his

father Terah in the land of his nativity, in Ur of the Chaldees." 31, "And Terah took Abram his son, and Lot the son of Haran his son's son, and Sarai his daughter-in-law, his son Abram's wife; and they went forth with them from Ur of the Chaldees, to go into the land of Canaan." Gen. xi. 1, "And the whole earth was of one language, and of one speech." Here the families of the sons of Noah are referred to as the whole earth, going up to one place for one object to build a city and tower; but they were dispersed, and their language confounded.

Gen. x. 5, "By these were the isles of the Gentiles divided in their lands; every one after his tongue, after their families, in their nations." This shows that Gentiles existed that did not go up to Shinad, and were of different tongues. (See Conant's translation and notes.)

Deut. vii. 6, "For thou art an holy people unto the Lord thy God: the Lord thy God hath chosen thee to be a special people unto himself, above all people that are upon the face of the earth."

7, "The Lord did not set his love upon you, nor choose you, because ye were more in number than any people; for ye were the fewest of all people."

17, "If thou shalt say in thine heart, These nations are more than I, how can I dispossess them?"

It is unreasonable to suppose that the Gentiles were the offspring of Noah's family after the flood, or descendants of Adam. The horrid doctrine of incest is ascribed to Cain, as being placed under the necessity of marrying an unknown sister to begin the peopling of the world, contrary to the law of a holy God, who manifests His displeasure of violated law by imposing penalties thereon. We see, however, His purpose to confer blessings on a race (Rom. viii. 20) which He was about to perfect through intermarriage with a race made conscious of God and his purposes (Gal. iii. 22). We see descendants of Seth and a Pre-Adamite wife recognized by God as legitimate offspring; Enoch, because he was pious, translated; Abraham, in whom the world is blessed; Moses the law-giver, and Christ descended in the family line to save all (Heb. ii. 16, 17; Eph. i. 4, 5).

We, of the common people, can more readily divest ourselves of preconceived notions than those shackled by erroneous creeds of theological institutions, and by mere scientific, human learning, which excludes the inspired word. We live in a time when it should be esteemed a duty and pleasure to seek for the spirit of

Paul, and to pry into the mysteries of revelation and arrive at the truth for ourselves. Many read the whole Bible yearly through sectarian spectacles, restricting themselves to preconceived notions, and never seeing new truths. It is much easier to reach the truth by beginning with Moses than by delving in the rubbish of creeds so diversified and erroneous, as well as extraneous, from the one vital point, presented by Christ, of eternal life in Him alone through faith and obedience. If a man knows his soul-life is limited to the end of time, he cannot complain of its expiration if he refuse to accept the offer of a gift of Christ's divine life. Let the whole Bible be its own interpreter as to the history, nature, and destiny of man. This is the only method of removing the infidelity of the age. No history is so perfect as the Bible respecting the origin, nature, and destiny of man and his relations to God; and only when we confine ourselves to that for first principles can we get the truth. In searching for Pre-Adamites and their descendants, we cannot avoid the details which embrace all that pertains to man, now and hereafter, because the whole is so completely interwoven in the Bible, one passage explaining another. For instance, in comparing Is. xlii. 1-5, and the texts following, they corroborate what we find in Genesis pertaining to man's creation, his "breath and soul," and God's method of imparting knowledge to him through Adam, and making him immortal through Christ (2 Tim. i. 10).

Had learned authors thus searched the Bible, the world would have been more advanced in these things.

In what sense have the Pre-Adamites been made a mystery? Rom. xvi. 25, "According to the revelation of the mystery, which was kept secret since the world began;" Eph. iii. 9, "And to make all men see what is the fellowship, which from the beginning of the world hath been hid in God, who created all things in Jesus Christ;" Chap. i. 4, "According as he hath chosen us in him, before the foundation of the world, that we should be holy and without blame before him in love;" 5, "Having predestinated us unto the adoption of children by Jesus Christ;" 9, "Having made known unto us the mystery of his will, according to his good pleasure, which he hath purposed in himself;" 10, "That in the dispensation of the fullness of times he might gather together in one all things in Christ, both which are in heaven, and which are on earth, even in him."—

Is it not in respect to his salvation in the

"fullness of times?" Is it not in respect to his relation to all mankind after Adam?

If Gen. i. 24 gives his creation, and Adam was created to make known to him his Creator, and unite him in a common promise, it cannot be said that he was unknown; yet in Isaiah and Jeremiah it is said, "there were distant, ancient nations, of diverse tongues, which neither the Jews nor their fathers knew of." Ethnologists have pointed out the existence of man in races that have passed away, but have not given their origin.

We claim to have pointed out in Gen. i. 24, language which clearly gives their origin, as it cannot be applied to any other creatures. If this is denied, that portion of the 24th verse, "living creature after his kind," is entirely superfluous, as the subsequent words are sufficient, viz., "Let the earth bring forth the cattle, creeping thing, and beasts of the earth after their kind," to inclose all animal life known on the earth. What we claim for "living creatures" harmonizes with the subsequent references to Pre-Adamites, clearly giving their creation and history, while the *mystery* concerning them consists in their relations to Christ and His plans of a common salvation; hence the necessity of appealing to the Scriptures to clear up all the mysteries concerning them. Does not the very nature of this mystery, considering the author and subjects of it, signify the accomplishment of some great good through the death and intercession of our Great High Priest?

Does not the character and government of God suggest an impartial administration of mercy and justice, by embracing all human souls from the first Pre-Adamite to the end of time?

In the nature of things, does not the origin, infancy, and circumstances affecting human souls here suggest a conscious soul-world, wherein the departed soul is to mature, as the next link in the order of time, connecting the present with the eternal future? If not, wherein is it possible for all to profit by a common salvation, and to mature for a final spirit-world?

Pre-Adamites having been created subject to a hope in Christ (Rom. viii. 20), they and their descendents dying ignorant of it, can alone profit by it in a conscious soul-world.

In the nature of things and in conformity to those purposes of God in Christ, "before the foundation of the world," "hid from generations for ages," "to be made known in the fullness of times," and in order that when Christ

came in person to accomplish His work, sending His spirit and revealing Himself, mankind should know of Him and be capable, as responsible beings, of appreciating His character and work, and their relations to Him in the flesh.

If we were to reach the divine nature through Christ, the second Adam, assuming our flesh, we may see the philosophy of providing for a union of Pre-Adamites with Christ's human nature through the revelation of God in the first Adam, all thus becoming one flesh by marriage, and foreshadowing the new birth mentioned by Christ to Nicodemus, through the second Adam, as a quickening spirit.

Divine revelation having made manifest the long-lost Pre-Adamites, the progress that has been made in human investigations as to their existence may now be utilized. Tradition and heathen records, supposed more ancient than Adam, may be drawn on for knowledge, many mysteries be explained, and religion and science harmonize and sects unite, on the one grand text of Gen. ii. 17, and St. John vi. 51. By examining the different texts referred to and their contexts and kindred texts in different parts of the Bible, the whole subject will be seen to be grand, interesting, and profitable, dissipating infidelity, and begetting faith and love for such manifestations of wisdom and goodness.

To show the importance of this question we quote the following passage from "Primeval Man," by the Duke of Argyll:

"Within certain limits, it is not open to dispute that the early condition of mankind is accessible to research. Contemporary history reaches back a certain way, existing monuments afford their evidence for a considerable distance farther. Tradition has its own province still more remote, and latterly Geology and Archæology have met upon common ground, in which man and the mammoth have been found together. . . .

"As regards the third element in the whole question—the element of Time—it is well known that all calculations in regard to it rest upon data respecting which there has always been much doubt and difficulty, and that similar data taken from the three existing versions of the Old Testament—the Hebrew, the Samaritan, and the Septuagint—give results which vary from each other, not by years or even by tens of years, but by many centuries. Where differences exist of such magnitude, no confidence can be felt in any of the results. It seems more than questionable how far the history of man in the Old

Testament either is or was intended to be a complete history, or more than the history of typical men and of typical generations. At all events, it would be worse than idle to deny that this question of Time comes naturally and necessarily within the field of scientific investigation, in so far as science can find a firm foundation for any conclusion in regard to it. Having already quoted St. Augustine upon the general subject of the desire of knowledge, I cannot close even this cursory reference to the relation in which the Mosaic narrative stands to scientific research without dwelling for a moment on the very striking passage in which that great man deals with the only account which the world possesses of the history of creation. St. Augustine was not the man to be dead to all those curious speculations and inquiries which that account excites, and which it does not profess to satisfy.

"His confessions, he says, would not be the humble confessions he desires them to be were he not to confess that as regards many of these questions he does not understand the sense in which Moses wrote. All the more does he admire his words, 'so sublime in their humility, so rich in their reserve;' then follows a passage (lib. xii., c. 31) which—considering also the vague notions entertained by St. Augustine himself, and by all the world in his time, on the rank and importance of the natural sciences—is surely one of the most remarkable passages ever written by theologian or philosopher. 'For myself,' he says, 'I declare boldly, and from the bottom of my heart, that if I were called to write something which was to be invested with supreme authority, I should desire most so to write that my words should include the widest range of meaning, and should not be confined to one sense alone, exclusive of all others, even of some which should be inconsistent with my own. Far from me, O God, be the temerity to suppose that so great a Prophet (Moses) did not receive from Thy Grace even such a favor! Yes; he had in view and in his spirit, when he traced these words, all that we can ever discover of the truth—even every truth which has escaped us hitherto or which escapes us still, but which nevertheless may yet be discovered in them.'

"Certain it is, that whatever new views may now be taken of the origin and authorship of the first chapter of Genesis, it stands alone among the traditions of mankind in the wonderful simplicity and grandeur of its words. Specially remarkable—miraculous it really seems to be—is that character of reserve which

leaves open to reason all that reason may be able to attain.

"The meaning of those words seems always to be a meaning ahead of science—not because it anticipates the results of science, but because it is independent of them, and runs, as it were, round the outer margin of all possible discovery. . . .

"Man is the latest work. Recent discoveries have thrown no doubt on this, but, on the contrary, have all tended to confirm it. I know of no one moral or religious truth which depends on a short estimate of man's antiquity. On the contrary, a high estimate of that antiquity is of great value in its bearing upon another question much more important than the question of Time can ever be, viz., the question of the unity of the human race."

McCausland, in his "Adam and the Adamite," says:

"To uphold the cause of revealed religion and vindicate the Bible in its integrity, is the first duty of the believer. His creed is, that all Scripture is by inspiration—the true and lively oracles of the living God. He, therefore, ought not to shrink from the examination of the tests of the authenticity of holy writ, whenever they present themselves for consideration. . . .

"When, where, and under what circumstances man became an inhabitant of the earth; whether human life, which is spread in such variety and so extensively over the continents and highlands of the globe, flowed from a single source or from several distinct sources, and at different epochs, is a question of deep importance and interest to every child of man. The laws of nature and divine revelation must be our guides to the solution of the difficulties which necessarily surround inquiries of this nature, extending to times of which all other histories and traditions are silent; and through their learning we hope to reach and establish truths which cannot otherwise be attained by human intellect. . . .

"When the links that bind the beginning of our race to the historical ages are thus taken away, the Adam of Genesis and his antediluvian descendents drift from our grasp, and become as unreal and mythical as the gods of the Grecians, or the divinities of the Hindoos. To avoid such unfortunate results and to preserve the Bible inviolate, we have only to construe the Scripture record of Adam's creation as what it professes to be, the record of the origin of the first of the Adamic race, and who came into a world peopled with uncivilized or semi-civilized races, that must have ever remained

in that low state without some such special interposition of the Almighty. This construction will be found to recommend itself by a more perfect consistency with the text, preserving, at the same time, the integrity of its chronology. . . .

"If, therefore, we cannot recognize man before Adam, the lesson of progress which the book of nature teaches is lost, or becomes com-

paratively insignificant, and the hope of a better state of humanity is known to us by divine revelation alone.

"But if Adam is placed in his right position as the crowning work, not only of the creation, but of a progressive humanity, then the Bible record of the future of man is confirmed by the foot-prints of the Creator on the field of past existences."

E. C.

A LANDSCAPE.

BY AMELIE V. PETTIT.

No! not a grand painting,
Just a blue bit of lake,
Where a bird might slake
Its thirst, or a deer,
Perchance, might there
Lave its sleek sides.

Just a quiet nook,
Full of hazy light,
Where no dazzling bright
Sun-rays ever flash
Their glory,—no dash
Of falling water.

A few mossy stones,
With soft ferns growing
Close beside, and throwing
A lace-like softness there,
One was maiden-hair,
Fairest fern living.

"Simple," so is nature,
In her quiet hours,
When making flowers,
Or such cosy places,
Or those gentle faces
That win our love.

CHARACTER AND SUCCESS.

IT is true that there is now and then a case of a life broken and baffled by circumstances, which the unfortunate could not prevent or remedy; but it is true, also, that such cases, as affecting men of well-developed minds, are exceeding rare. As a general rule, it may be affirmed that he who sits down and laments the condition to which adverse occurrences have brought him, and attributes his unhappy plight to causes entirely beyond himself, really owes it chiefly to his own indiscretion or weakness.

I do not care to have it understood in this connection that the success which should be secured by all earnest workers is the artificial acquirement of money merely. By no means. Such success in the eye of Him who "sitteth in the heavens" is insignificant. He often sees and smiles upon a triumph where men behold what they consider failure and disaster. The forces working unseen within a man's own spirit are often doing the most and the best for him—molding his character and life into harmonious adaptation, and giving him a clear outlook upon the world and upon the true purpose of existence.

The young man who sighs for pecuniary gain and deems himself hardly-conditioned because the incident of birth did not furnish wealthy

parents, and influential business friends, and because he must commence life "at the bottom of the ladder," may be heard to complain with doleful countenance, "I have no chance." "No chance!" Has he not youth, strength, mental faculties susceptible of indefinite development, and a world teeming with suggestion at his elbow? "No chance!" and, with thirty or forty faculties in his head, each of which may be made contributory to his advancement, each an efficient co-operator with his free and strong hands!

No chance to get worldly pelf! Need we mention the names of Law, Vanderbilt, Astor, Girard, Longworth, Cornell, Peabody, Drew, Cooper? Doubtless they once regarded their chances as few and slim.

No chance to achieve greatness! Think of Matthew Hale, Mansfield, Burke, Peel, Wolsey, Whitfield, Stephenson, Samuel Lee, West, Eldon, Clay, Marcy, Phillips, Arkwright, Howe, Benton, Lincoln, and the hundred others whose chances for success lay not in their opportunities, but in their earnestness of purpose and unflagging industry.

There is no "cross cut" to true success and honorable advancement. Surroundings may aid, but they cannot supply personal energy or confer mental capacity. If one would stand,

like Saul, above his brethren, he must look to himself for the means of advancement, to his conscientious, unflinching, untiring, well-directed efforts. When the wagoner appealed to Jupiter to help in extricating his cart, which had stuck fast in the mire, Jupiter answered, simply, "Put your own shoulder to the wheel." There are too many young men in our American cities and towns who are found hanging round corner stores and taverns, chewing filthy tobacco, smoking bad cigars, frequently drinking poisonous liquor, and when remonstrated with for their idleness, deplore their "bad luck" in being born poor, and unable to procure "paying" situations. If told to go to work and redeem their "luck" they feel aggrieved and insulted. Their "chances" must be brought conspicuously to their notice. The apples must be shaken from the bough into their very hands. Poor, purposeless souls! they have a "natural" dislike for *work*, but are willing to tread the downward road to ruin, it is so comfortable to do nothing!

The poor boy who picked up a pin on the sidewalk as he was going from a great banking house, saddened by the denial of his applica-

tion for a humble place therein, illustrated in that very act of frugality the character which made him one of the most celebrated financiers of Europe. To be sure, much patient effort may be spent apparently in vain. This must be expected; but, though it does not bring the desired end, it is not lost. By no means; the experiences of failure may be rich in useful information, and, in after years, contribute to multiply one's success ten-fold.

The men who have achieved that success which the world calls great are not your brilliant universal geniuses, for such men do not often accomplish anything of important value, because they have no decision of character, no settled aim of life. A fair amount of brain development, with strong Firmness, Self-Esteem, and Conscientiousness, and good health, are a sufficient capital for one to make his way with. Having set some object before him, let him bend all his energies and consecrate all his powers upon its attainment, and success will be certain.

Here is the secret of a triumphant life: Decision of character, some definite object in view, steadfast industry. RAY DENTON.

SCIENCE PERFECTING SWIMMING.

FREDERICK BARNETT, of Paris, has patented a novel yet simple apparatus for swimmers. The invention consists in supplying to man by art the apparatus which has been given to the frog by nature. For the hands, he has a large membranous fin which is held to its place by loops passing over the fingers and a strap around the wrist. The surface presented to the water by these fins is so large as to add greatly to the effectiveness of the strokes of the arm, but not so large as to exhaust the muscular power. Their effect is to very much reduce the effort usually required in swimming. But the greatest ingenuity is displayed in the form and fitness of the fins for the legs, which are attached to the ankles, and are so formed that they act upon the water, in the movement of bringing forward the legs as well as in throwing them back. They act so finely in treading water, as swimmers call it, that one can really walk, if not on the water, at least in it.

The difference between swimming with this apparatus and without it, is very much like the difference between rowing a boat with a handle and the blade of an oar. The old

swimmer has no trouble in using the fins at first trial, and is surprised to find with what strength he can swim without exhaustion. He easily swims twice as fast with the apparatus as without it, and with it he can sustain himself for hours upon the water, or swim many miles.—*Scientific American*.

Will not this invention tend to save human life? We regard the art of swimming something more than a luxury. Every child—boy and girl—at ten years of age should be taught to swim. It is a duty which parents owe to children. We teach them various arts by which to earn a living, why not the art of swimming, by which to *save* life? We publish at this office a little book,* with numerous illustrations, which teaches the art of swimming in the usual way. In France, every soldier is taught to swim as a part of his military education.

* "The Science of Swimming:" as Taught and Practiced in Civilized and Savage Nations. With particular Instructions to Learners; also showing its Importance in the Preservation of Health and Life. Illustrated with engravings. By an experienced swimmer. Price, 25 cents.

WISDOM.

MAN must will the *good* and the *great*; the rest comes as decreed.—*Humboldt*.

TRUE liberty consists in the privilege of enjoying our own rights—not in the destruction of the rights of others.

* * "RINGS the world
With the vain stir; I sum up half mankind,
And add two-thirds of the remaining half,
And find the total of their hopes and fears
Dreams, empty dreams."

THERE is nothing like a fixed, steady aim, with an honorable purpose. It dignifies your nature and insures your success.—*Becher*.

EPITAPH ON A MISER.

Reader, beware immoderate love of pelf!
Here lies the worst of thieves—he robbed himself.

THOSE things which now seem frivolous and light will be of serious consequence to you when they have made you once ridiculous.

THOUGH a taste of pleasure may quicken the relish of life, an unrestrained indulgence leads to inevitable destruction.

MIRTH.

[Under this heading we propose to publish

"A little nonsense now and then;"
which
"Is relished by the wisest men."]

"Excuse haste and a bad pen," as the pig said when he broke out.

WOMAN first tempted man to eat. He took to drinking on his own account.

A NANTUCKET storekeeper advertises for sale, "Quart bowls, of all sorts and sizes, ninepence apiece and various prices."

"God made us men!" was inscribed upon a wagon filled with women at the Fifteenth Amendment jubilee in Louisville.

A WRITER on physiognomy sagely says, "A human face without a nose does not amount to much." It is also true that a human nose without a face doesn't amount to much either.

"Ah, Mr. Simpkins, we have not chairs enough for our company," said a gay wife to her frugal husband. "Plenty of chairs, dear, but too much company," replied Mr. Simpkins, with a knowing wink.

A LADY, fond of reading Bulwer's works, went into a book-store a short time since, just as one of the clerks had killed a large rat. "I wish to see 'What will He do with It?'" said she to a boy behind the counter. "Well," said the boy, "if you'll step to the window, you will probably see him sling it into the back lot."

A DUTCHMAN, the other day, reading an account of a meeting, came to the words, "The meeting then dissolved." He could not define the meaning of the last word, so he referred to his dictionary and felt satisfied. In a few minutes a friend came in, when the Dutchman said, "Dey must have very hot wedder dere; I ret an agount of a meeting vere all de peoples melted away."

Our Mentor Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of its early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage.

VENTILATION.—How should a room be ventilated to secure health in sleep, for age and youth? and should age and youth sleep in one bed or in one room? and should the ventilation be near the floor or ceiling to save the heat?

Ans. A second or third floor makes the best sleeping-room. Near the ground the unwholesome vapors lie at night. The air, laden with foul smells, even though there is a gentle breeze, will be almost

suffocating six feet from the ground, and entirely fresh and sweet fifteen feet above.

To ventilate a room for sleeping, openings should be made near the floor to let the foul air escape, and openings at the top to admit fresh air. Warmth in cool weather should be secured to the sleeper, not by warming his room, but by means of blankets—giving him fresh, cool air to breathe.

If a warming apparatus can be so arranged as to drive heated air into apartments strongly, it may profitably be introduced at the top of the room, and the foul and exhausted air withdrawn from the bottom, especially if the ventilators are connected with flues which rise high enough to create a good draft. If these flues can be connected with the smoke-stack, the waste heat from the combustion of fuel will make a draft that will take off all foul air from the bottom of a room and give a pleasant summer character to the air of a house. Age and youth should not occupy one bed under any cir-

cumstances; and it were better not to occupy the same room—though perfect ventilation would obviate this objection.

SPIRITUAL MANIFESTATIONS.—I would like to know your explanation of spirit manifestations, such as writing on a slate without visible hands or other visible power, and the moving of furniture and other things by unseen power.

Ans. The best answer we can give at present is to refer the reader to a book published at this office entitled "LIBRARY OF MESMERISM AND PSYCHOLOGY," price, \$4, and to another volume just from the press, entitled, "WITCHCRAFT, PLANCHETTE, AND SPIRITUALISM." In these two works may be found all that has yet been developed of a reliable character on this subject.

HEADS FLATTENED.—Will a pressure or weight placed upon the head of a youth retard the development of any portion of the brain? If so, is it proper to advise the same in the *Science of Health*?

Ans. In the *Science of Health* the maid with a book on her head has a folded cloth under the book to make a flat place for it to lie and to give a soft surface or bearing on the head. Such a use of weight on the head for ten minutes several times in a day will not hurt the head any more than laying the weight of the head on a hard pillow or on a muscular arm. Many men sleep all night with the head upon the arms, and bony arms at that. The object of carrying a weight on the head is to train all the muscles of the back and neck, and to give a balanced, dignified carriage. If in any case the head is found to be too soft to carry a book thus padded, a small sack of corn-meal or an over-ripe pumpkin may be used.

HAND-SHAKING.—Is the practice of extending a finger or two in shaking hands a piece of imitative snobbery, or is it a mark of esteem?

Ans. It does not spring from hearty and affectionate respect, but is a careless, free-and-easy manner of greeting, partaking often of the spirit of rowdiness and often of snobbery. Men often shake hands with two at once, extending the left hand to one and the right hand to another. This shows genial, generous familiarity and friendship. When a person offers you one or two fingers for you to shake, never permit him to repeat the offense. It is an inexcusable rudeness.

WHISKERS. — SEBASTOPOL, SONOMA CO., CAL.—*Mr. Editor:* Does shaving the face make whiskers grow better? Would they not grow as thick and be finer without shaving? Is it necessary to shave at the age of eighteen years to make whiskers start well? What will make the hair curl?

Ans. There are several remedies for the above-named complaints. One of the best means to make the whiskers grow is to put on a little sweet cream once in a while, and before it dries in let the cat lick it off. It is better for the whiskers never to apply the razor. Only criminals, sick folks, or sinners ever shave. The best cream to use is that

which rises on sweet milk, not such as is sold by druggists.

To make the hair curl, eat plenty of pudding and milk; when milk is scarce, molasses—treacle—may be substituted. Take it when hungry. One other way is, to take a little fine toilet soap once a week, in warm weather, a bucket of soft water, and wash the hair perfectly clean. Then rub dry with a towel. Then comb and brush it as usual. Then shake your head as a dog shakes himself when he comes out of a brook, and if there is any curl in your hair it will then be manifested. Don't pay your money for quack specifics to make whiskers grow, to curl the hair, or to color it. All these things are bad, bad, bad! After following our directions for a while, please write again and say how you like it.

P. S. Don't go to a barber's shop and have your head made nasty with grease before taking it to a phrenologist to have a chart made out.

DEAFNESS.—Do you think the use of instruments good for the hearing? [Yes, sometimes.] Do you know of any remedy for partial deafness? [It depends on the cause.] Will your catarrh remedy, mentioned in a late number, cure deafness resulting from that disease? [Yes, if anything will. Try it.]

I am a young lady about twenty, and have been growing gradually deaf the last five years. Have tried plenty and variety of quacks, receiving as much benefit as might have been expected, till at length I almost despair of ever having my hearing back again. You will say, "Consult a physician." I don't believe in doctors generally, but I do in you. If you will please answer the above questions in the JOURNAL, you will doubtless confer a great favor upon more than one of your afflicted fellow-creatures.

Ans. Firstly and lastly, keep away from the advertising quacks. Learn, if you can, the *cause* or *causes* of the infirmity. Read what the "Hydro-pathic Encyclopedia" says on the subject, and act according to its directions. No quack nostrums are recommended, and if you follow its hygienic prescriptions, you cannot go wrong. To attempt to give specific directions here would occupy too much space.

EMPLOYMENT IN ASIA.—How can I get a situation in some business enterprises in India, China, or Japan?

Ans. The Labor Department of our National Bureau of Migration has not yet extended its operations over those distant fields. One way to secure the object would be through our American Consulates, another through our shipping merchants who trade in those countries. Ask Mr. Seward, of Auburn, N. Y., who knows all about it.

ENGRAVING.—What are the natural talents required for an engraver on wood, stone, or metals? and is it requisite that one serve a regular apprenticeship? and is there any work on the subject?

Ans. One has to work for years at the business in order to become expert, and he should work under good instruction in order to secure the

highest order of success. He needs a clear vision and a strong eye, a steady and calm nerve. He needs large Form, Size, Order, Imitation, Ideality, and Continuity. Miss Fuller has written a book on the subject, which we can send by mail for 50 cents.

DOLLY VARDEN.—Who or what was Dolly Varden? The fashions of the day partake in a great measure of "Dolly Varden" styles. Can you give me a clue to the origin of the name?

Ans. If you take the trouble to read Dickens' "Barnaby Rudge," you will find Dolly Varden to be a character therein. A locksmith's daughter, she is described as having the "face of a pretty, laughing girl; dimpled and fresh and healthful—the very impersonation of good-humor and blooming beauty." Again, she is spoken of as having her "charms increased a hundred-fold by a most becoming dress, by a thousand little coquettish ways." She is represented as having been attired on a certain occasion "in a smart little cherry-colored mantle, with a hood of the same drawn over her head, and upon the top of that hood a little straw hat, trimmed with cherry-colored ribbons."

What They Say

GRAIN RAISING IN THE NORTH-WEST.—The climate and soil of the valley of the Red River of the North is peculiarly adapted to the raising of small grain, especially wheat, oats, and barley. There is so little waste land that thousands of acres can be farmed together in one field. Then the three railroads running through the valley insure a market in addition to the home market. In calculating expenses of co-operative farming and the proceeds thereof, let us confine ourselves to the raising of wheat. We will suppose that ten persons furnish \$2,000 each, making a capital of \$20,000. The agent or foreman should be a practical western man of experience, who can give bonds in double the amount invested. After deciding on a certain programme, the agent should have full power to proceed with opening the farm and to pay accruing expenses. After plowing in the fall, there would be no more expense until the next spring, when the seed is sown. The money for harvesting would not be in use over sixty days, as returns would come in by that time. In calculating the expenses we take the highest rates of labor, and in estimating the returns of crops, the lowest estimates. There are parties here to-day who will contract to do the work at these figures: 1,000 acres of land purchased of the Western Pacific R. R. Co. at \$7 per acre will amount to \$7,000. Breaking the same at \$5 per acre, \$5,000; add \$500 for expense of foreman's wages, etc., making \$12,500 the first year. 2,000 bushels of seed-wheat, \$4,000; sowing and fitting ground according to contract, \$2,000; attending the same three months,

\$500; harvesting and stacking, \$2,500—making the amount required for the second year \$9,000. The average yield per acre is 35 bushels; some fields yield 50 and even 60 bushels per acre of spring wheat. We may be safe certainly in estimating that 20 bushels will be saved, which brings the amount to 20,000 bushels. Threshing \$1,000—making a total amount of capital invested, \$22,500. Threshing and foreman's wages (\$1,000) paid after grain is sold. The grain will bring one dollar per bushel in the bins. So that the land, breaking, and everything is nearly paid for by the first crop. Now, the land will bring \$10 per acre cut up into small farms, leaving a net gain (without interest) of \$6,500. If the land is not sold, the second crop will bring 50 per cent. on the amount invested, allowing a broad margin for profit over and above this rate of interest. Of course by residing on the land, and using stock belonging to the Company, greater results could be attained, the work being done better and at less cost, etc. There is one farm here of 2,000 acres, now being plowed a second season.

H. S. B.

RATHER WARM APPROVAL.—*Dear Editor:* While renewing my subscription for the JOURNAL I beg to convey to you many thanks for its services, and also—if you have not become by a knowledge of your importance to the world too vain to accept it—to tender you, by way of encouragement, the story of its service to me.

Your dear JOURNAL has found or followed me through nearly every State and Territory in America. It was my companion when I had none other but the savage, and a cherished, ever-agreeable associate through the entire war for the Union; and now that I have abandoned the frontier and the field for the quiet and pleasant walks of life, it comes to me, as it is, an old companion and endeared friend. It is quite as acceptable in prosperity as it was when it found me in a hut, where it and it alone sowed the seed from which to-day I reap a rich harvest, and am sought as a suitable companion by those who have from the cradle enjoyed every advantage of wealth and training. I have had no other tutor, and how I may discharge the debt I owe for my very existence even, I leave for you to say, and feel assured that no demand could exceed the value of the JOURNAL to your obedient servant,

J. J. B.

BRAINS APPRECIATED.—The *Buckeye State*—that means the newspaper published in New Lisbon, Ohio—says: There is no abatement in interest in the pages of the PHRENOLOGICAL JOURNAL, for although it has long since attained an enviable position in presenting and sustaining the highest character of magazine literature, the present managing editor keeps it up to this standard. Brains engineer this monthly and brains appreciate it. The current number is unusually interesting, almost every department of literature being maintained. The price is three dollars a year.

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

VOL. LV.—No. 3.]

September, 1872.

[WHOLE No. 404.]



PORTRAIT OF JAMES BLACK.

THE PRESIDENTIAL CAMPAIGN—No. IV.

JAMES BLACK—JOHN RUSSELL, CANDIDATES OF THE NATIONAL TEMPERANCE PARTY.

THE great political parties, Republican and Democratic, have declared the results of their conventional deliberations, and inscribed on their campaign banners the names of those whom they respectively would have

to lead the "Ship of State." The movements among those who exercise a controlling influence in matters political have been marked by developments of a remarkable nature. We have seen, as has been already

noted at length, the so-called Reform or Liberal-Republican movement giving its adhesion to an eminent New York journalist, thereby surprising the country at large, not on account of any lack of merit in the man *per se*, but because the attention of people at large had been directed to other persons of prominence, and because, as a minor consideration, perhaps, the said Liberal Convention was thought to represent the sentiment of "free trade" rather than that of "protection," a stout champion of which Mr. Greeley has long been recognized.

We have seen also the great Democratic interest, with its full representation from North and South at Baltimore, deliberately and unanimously ratifying and confirming the nominations of the Liberal-Republican Convention, and adopting as a whole the strong declaration of the Cincinnati platform. If the spirit of liberality and compromise thus indicated be the direct outgrowth of an honest and cordial desire on the part of politicians to bury "the hatchet" of strife and rancor, and to join manfully in the endeavor to promote the welfare of our common country, it cannot be denied that the political outlook is favorable, and that the impending contest between the friends of the Philadelphia nominees, whose "platform" contains many high and noble principles, and the Cincinnati-Baltimore nominees will be productive of desirable results on whichever side the laurels of victory may repose.

The party, or organization, or class whose importance now demands our special recognition is that known by the comprehensive term, Temperance. On the 22d of February of this year a convention composed of the adherents of Prohibition met in Columbus, Ohio. Two hundred and forty-six delegates, representing thirteen States, were present, and after some very interesting addresses and discussions, unanimously nominated James

Black, of Pennsylvania, as their candidate for President of the United States, and John Russell, of Michigan, for Vice-President.

Thus one of the most important of reformatory movements in society has its part in the grand campaign just opened. Let us now consider briefly the men thus selected as the standard-bearers of Temperance. Both have well-formed heads, as is evident enough from the portraits and physiognomies which impress the observer at once with opinions far from unfavorable to them.

Mr. Black has a large brain and a well-proportioned body, and he is sound both mentally and physically. He has a deep sense of integrity, of kindness, devotion, and decision. The effort at self-denial may once have caused a struggle, but he gained the victory, and is now master of himself. When he says No, he means it, and holds to it. He has method, and works according to its requisition. He has economy, and is saving and prudent. His discernment of character is such that he can read with facility the motives of strangers. His is a practical cast of intellect, and he is a common-sensed man. There is dignity enough to enable him to command respect; executiveness enough to carry out what he undertakes. He will be true to principle and hold steadfastly to his convictions.

Mr. Russell also has a large brain, with a strong, well-cultivated, and comprehensive mind. He is well-balanced, equable, self-regulating, and consistent. The word "circumspect" applies to him in a remarkable degree. Such a character may be depended on under all circumstances. There are no foxy traits or tricks, no double-dealing in his composition. Benevolence and Conscientiousness are his ruling moral traits. Causality, and, in fact, the entire intellectual group are large.

Of the two, Mr. Black is more eminently the observer, and Mr. Russell the thinker.

In one the perceptive faculties predominate, and in the other the reflectives predominate. To the one we should look for descriptions of definite and direct personal experiences, and to the other for dry, hard logic driven home with earnestness and unction.

Our biographical sketches are only too

of age. In 1836 the family of Mr. Black removed to Lancaster, Pennsylvania, which city has been the place of his residence ever since. In 1840 he took the pledge of total abstinence, and at once identified himself with the temperance reform. In 1846 Mr. Black was admitted to the practice of law, and has ever since been known as an upright,



PORTRAIT OF JOHN RUSSELL.

short, but, as they are, we are indebted for the materials, and also for the engraved portraits, to the *Prohibition Era*, of Cleveland, Ohio, a paper whose hearty utterances in behalf of temperance reform command the respect of every true man.

James Black was born in Lewisburg, Union County, Pennsylvania, in September, 1823, and is therefore now nearly forty-nine years

able, and conscientious member of that profession. The part he has borne in affairs semi-political has been almost entirely in connection with the Temperance movement. It was his pen which drafted the call for the National Convention, at Chicago, in September, 1869, at which time the National Prohibition Party was organized, and he had the honor of presiding over its deliberations.

In Pennsylvania he has manfully stood up for the party, and has the satisfaction of finding many who at first doubted the wisdom of his course, now coming over to his support. As a speaker, Mr. Black is earnest, manly, and outspoken. Even those differing with him respect and admire him for straightforwardness and steadfastness of purpose.

John Russell, the candidate for Vice-President, was born in Livingston County, New York, September 20, 1822, and shortly after became a resident of that State, near the Falls of Niagara. When he was seventeen years of age his parents removed to Michigan, where they are still living, at a ripe old age. Mr. Russell entered the ministry of the Methodist Episcopal Church in August, 1843, in connection with the Detroit Conference, and still retains his membership therewith. In the Temperance cause he has been especially prominent, the honors of office, in the organizations of which he is a member, being laid "thick upon him." About a year and a half ago the R. W. Grand Division made him its presiding officer, and thus he has become as favorably known outside of Michigan as has long been the case in that State. Mr. Russell has proved his devotion to the cause by many sacrifices. Though not possessed of much of this world's goods, he has contributed almost every dollar he had to sustain a sterling temperance paper, the *Peninsular Herald*, and responded to many calls to speak when but partially remunerated for such services. As a platform speaker there are not many who can be named as his superior for keen logic, clear analysis, and genuine wit.

If any of our readers entertain doubts with reference to the meaning of "Prohibition" and its bearing on the political issues of the times the following declaration of principles should set them right.

THE PLATFORM.

Resolved, That we reaffirm the following resolutions adopted by the National Prohibition Convention, held at Chicago, September 2, 1869:

Whereas, Protection and allegiance are reciprocal duties, and every citizen who yields obedience to the just commands of the Government is entitled to the full, free, and perfect protection of that Government

in all the enjoyment of personal security, personal liberty, and private property; and

Whereas, The traffic in intoxicating drinks greatly impairs the personal security and personal liberty of a large mass of the citizens, and renders private property insecure; and

Whereas, All other political parties are hopelessly unwilling to adopt an adequate policy on this question; therefore, we, in National Convention assembled, as citizens of this free republic, sharing the duties and responsibilities of its government, in discharge of a solemn duty we owe to our country and our race, unite in the following Declaration of Principles:

1. That while we acknowledge the pure patriotism and profound statesmanship of those patriots who laid the foundations of this government, securing at once the rights of the States, severally, and their inseparable union by the Federal Constitution, we would not merely garnish the sepulchres of our republican fathers, but we do hereby renew our solemn pledge of fealty to the imperishable principles of civil and religious liberty embodied in the Declaration of American Independence and our Federal Constitution.

2. That the traffic in intoxicating beverages is a dishonor to Christian civilization, inimical to the best interests of society, a political wrong of unequaled enormity, subversive of the ordinary objects of government, not capable of being regulated or restrained by any system of license whatever, but imperatively demanding for its suppression effective legal prohibition by both state and national legislation.

3. That while we recognize the good providence of Almighty God in supervising the interests of this nation from its establishment to the present time, having organized our party for the legal prohibition of the liquor traffic, our reliance for success is upon the same Omnipotent arm.

4. That there can be no greater peril to the nation than the existing party competition for the liquor vote; that any party not openly opposed to the traffic, experience shows, will engage in this competition, will court the favor of the criminal classes, will barter away the public morals, the purity of the ballot, and every object of good government, for party success.

5. That while adopting national political measures for the prohibition of the liquor traffic, we will continue the use of all moral means in our power to persuade men away from the injurious practice of using intoxicating beverages.

6. That we invite all persons, whether total abstainers or not, who recognize the terrible injuries inflicted by the liquor traffic, to unite with us for its overthrow, and to secure thereby peace, order, and the protection of persons and property.

7. That competency, honesty, and sobriety are indispensable qualifications for holding public office.

8. That removals from public service for mere difference of political opinion is a practice opposed to sound policy and just principles.

9. That fixed and moderate salaries should take the place of official fees and perquisites; the franking privilege, sinecures, and all unnecessary offices and expenses should be abolished, and every possible means be employed to prevent corruption and venality in office; and by a rigid system of accountability from all its officers, and guards over the public treasury, the utmost economy should be practiced and enforced in every department of the government.

10. That we favor the election of President, Vice-President and United States Senators by direct vote of the people.

11. That we are in favor of a sound national currency, adequate to the demands of business, and convertible into gold and silver at the will of the holder; and the adoption of every measure compatible with justice and the public safety, to appreciate our present currency to the gold standard.

12. That the rates of inland and ocean postage, of telegraphic communication, of railroad and water transportation and travel, should be reduced to the lowest practicable point, by force of laws wisely and justly framed, with reference not only to the interests of capital employed, but to the higher claim of the general good.

13. That an adequate public revenue being necessary, it may properly be raised by impost duties and by an equitable assessment upon the property and legitimate business of the country; nevertheless, we are opposed

to any discrimination of capital against labor, as well as to all monopoly and class legislation.

14. That the removal of the burdens, moral, physical, pecuniary and social, imposed by the traffic of intoxicating drinks will, in our judgment, emancipate labor and practically thus promote labor reform.

15. That the right of suffrage rests on no mere circumstance of color, race, former social condition, sex, or nationality; but inheres in the nature of man; and when from any cause it has been withheld from citizens of our country who are of suitable age and mentally and morally qualified for the discharge of its duties, it should be speedily restored by the people in their sovereign capacity.

16. That the fostering and extension of common schools under the care and support of the State, to supply the want of a general and liberal education, is the primary duty of a good government.

17. That a liberal and just policy should be pursued to promote foreign immigration to our shores; always allowing to the naturalized citizens equal rights, privileges, and protection under the Constitution with those who are native-born.

Now, let the men set forward by this party be compared personally with other candidates, and compare also the different platforms. Then, reader, decide for whom you will vote at the coming Presidential election. While, as editors and publishers, we cannot advocate the claims of any of the "parties" as such—our Journal being non-partisan—still we have our preferences, and shall exercise them, in accordance with our best judgment, in the interest of our whole country. We count this not only the privilege also of others, but their absolute duty as American citizens. Our readers of the *PHRENOLOGICAL JOURNAL* know very well where we stand on the Temperance question. We would select or appoint no man to office who is addicted to the habitual use of alcoholic liquors. Aye, we would go further than this: we would require every applicant for any public place of trust to be strictly temperate. Of course this would exclude many who are Representatives and Senators from the halls of Congress, but we would make this compulsory. Total abstinence, or no office; and we will yet bring the country to it, or, failing, we will die in the good fight.

THE LABOR QUESTION.

THE labor question, as it is called, has been thrust upon public attention chiefly through the influence of societies originating with foreigners on our shores, copied from similar associations existing in the old country, to which, before settling in America, they had belonged. In the strife and competition existing in an overcrowded population, where there are five pairs of hands ready for the work which four can do, labor may need something besides the law of demand and supply to regulate it. It is true employers who are wealthy can, in an overpopulated country, cut down wages and oppress the laborer by keeping him too poor to be able to quit his ill-requited employment and spend time to look for better, and then take advantage of the fact that the idle and hungry stand ready to fill the places of the discontented should they clamor for more pay, or quit work in case they met with a refusal. Under such conditions the labor societies of Europe were established.

In this country there is no necessity for such organizations. In spite of all the competition which exists, wages in America are twice as high as they are in Europe, and will so continue without the foolish legislation of demagogues, or the greater foolishness of strikes.

We have a firm conviction that the chief needs of this country are untrammelled competition and a proper diversity of trades and occupations. There is room and work for all the people, and a hundred millions more; but all can not get profitable employment at one thing nor in one place. There is a tendency, especially among our foreign immigrants, to stop in our large cities, to which, also, there is a tendency among our native population to come and strive for "a fortune." This double scramble for wages and wealth in large towns has two effects: first, to overdo the various trades and overstock every vocation; second, to drain away from the small towns and farming regions the labor requisite to carry on the industries of the country.

One result of such unequal distribution of labor-power is to cripple agriculture and necessitate the payment of exorbitant wages,

and another result is the rendering dear every product of the land which is to supply the wants of the cities and manufacturing towns. If a considerable amount of labor would bravely leave the cities it would give steady work to those remaining, and every industrial interest of the country regions would become prosperous; new lands would be brought under the plow, and the whole country increased in wealth and happiness. If nearly everybody wanted to make boots or buttons, how soon there would be a stress in the labor market in that direction, and how the cost or price of everything else would be enhanced! If nearly everybody desired to be occupied in a profession or in merchandising, how sore the trial and severe the struggle among the rivals, and how ill supplied would all other departments be! and, as a consequence, there would be a scarcity of food and an increase of the price of everything, without the corresponding profits of general industry to meet them. Apply this thought to the overcrowding of the cities and the industries belonging thereto, and we have a struggle in the city for work, and high prices for everything that we eat, drink, and wear. Every extra or unnecessary merchant or exchanger of products is a dead tax on all consumers. He must be paid for his time, or he must cheat or steal or starve. Every person fully earning his living and more, by producing something useful, or by transporting or exchanging the products of others, really adds to the public wealth, and tends to spread happiness over the land. Demagogues have tried to legislate on labor and the wages thereof, and on what shall constitute a day's work; but we see no benefit arising from it. It was evidently attempted to win votes in the interest of ambitious politicians, or to obtain favor and support from the laboring masses.

The recent strikes among mechanics and other laboring men, bring down numerous evils upon their heads. Everybody knows that if the day's work be reduced from ten hours to eight, nearly every product must be increased in cost at least twenty per cent. Now, the majority of the men who strike eat, drink, and wear all they earn. If, then, by

working eight hours only, they shall enhance the cost of all they buy, they will have to put up with one-fifth less in clothing, fuel, and food than they now get. And what will they do with the extra two hours of leisure? Will they spend it with books and with their families? Will not thousands of them spend the extra time in places of dissipation and in forming habits ruinous to mind, body, and family? When there is a strike, we notice that the grog-shops are thronged and are doing a thriving business, day and night, as long as the money of the workers holds out. Besides, another effect of strikes is to consume the little money which the provident have laid up in sustaining the families of those who have been improvident; and when that surplus is exhausted the strike has to be given up and work begins. Coal-miners strike for a term of three months, and eat themselves nearly out of house and home. Capitalists raise the price of coal, and other men as poor as coal-miners have to pay the capitalist his profit. Then the miner, without a dollar in his pocket or a pound of meat or bread in his house, begins to mine coal at the old prices. He has enhanced the cost of everything he uses by increasing the cost of coal to its consumers, and the result is, he has lost a quarter of his year's time, and cannot buy so many comforts with a dollar as he could before the strike. Who is benefited? Not he, surely, nor anybody else. Has he injured the capitalist? No! He has received the same money for a less quantity of coal, and has his mines still unexhausted. It has even been asserted and believed that coal-miners' strikes have been fostered and encouraged, even *procured* by the owners of mines and the railroads which transport coal to market, in order to have an excuse for raising the price of coal from \$6 to \$13 a ton. In fact, they might afford to stop the mines for months and pay full wages, and still make money at such figures as they sometimes sell coal at.

Some things about strikes and mechanics' societies are radically wrong. There is no reasonableness in requiring employers to pay poor help as much as they pay good workmen, nor in preventing those from working who desire to do so. In a free country every man has a right to sell his time, his skill,

and his strength at any price he can get or is willing to take, and no man or set of men has a right to hinder him, or interfere with his employer. Suppose all clergymen, all lawyers, all doctors, all merchants, were obliged by some rule to demand the same price for services or for products! Suppose a society of farmers were to resolve that no man should sell wheat, beef, butter, poultry, potatoes, or apples below or above a particular prescribed price, and should come to the market armed with clubs and guns to enforce their rules! and suppose mean butter, stale bread, scrawny chickens, execrable fruits, and short weight and measure at that, were forced upon buyers at the best prices! who would not rise with indignation to vindicate his rights in so plain a matter? Yet good and able workmen make rules requiring employers to hire men at full wages to work at trades who can neither do a good job nor a good day's work.

If men would work earnestly for eight full hours, they would to-day increase the average of production. Protected by society rules, men who are not high in moral tone idle away their time, and, even though the nominal time of the day's work be ten hours, they do not, in fact, do eight good hours' work. We were informed by a mechanic that men did not work so faithfully at eight hours as they did when they were working ten hours. It seems to be the theory of these societies that the workingman must prescribe the time he will work, the wages he shall receive, the number of apprentices the employer may keep, and other arbitrary regulations, while the employer has only to pay the bills and observe the strictest decorum.

These society arrangements are driving work away from New York, certainly to the rural districts or to distant cities; and men, in some cases, have to leave New York after, by strikes and exorbitant rules, they have injured or broken down their business, and seek work elsewhere at the same wages they refused to work for at home. One good thing we have heard of as resulting from society rules, and it is this, if a contractor fails to pay his bricklayer or his stair-builder, no man will plaster the house until the previous mechanic has obtained his dues.

We are sorry to say we have in New York and Brooklyn a few harpy builders, who manage to borrow money, obtain advances, and neglect to pay their workmen, and leave their houses half finished. If there could be a society to prevent anybody working for such men, it would be a good thing for all concerned. Besides, such builders never do good work, and the community as well as unfortunate workmen must suffer.

For ourselves, we believe in the civilizing influences of labor-saving inventions, in

mechanism, in the fullest development of Constructiveness, and would have every boy in America learn a trade. Yes, though he should finally become a farmer, a merchant, artist, or professional man, he should *first* learn a trade by which he could earn an honest living. Besides, learning a trade would in itself be educational, and assist in fitting the boy to do anything, everything, all the better for having first learned how to use tools. Let Americans continue to lead the world in new inventions and in mechanical skill. Let *all* our boys learn trades.

Department of Religion and Psychology.

Know,
Without or star, or angel, for their guide,
Who worships God shall find him.—*Young's Night Thoughts.*
The soul, the mother of deep fears, of high hopes infinite;
Of glorious dreams, mysterious tears, of sleepless fever night.—*Mrs. Hemans.*

THE POWER OF THOUGHT.

"Speak of his Highness from Inferno, and he stands beside you.
Talk of Angels, you hear the rustling of their wings."

IN the thought-world there are as many marvels, as many things wonderful and more incomprehensible than in the world of animal and vegetable life. Our friends sometimes ask, "How did you happen to think of that?" when we have spoken of something seemingly foreign to surrounding circumstances and topics of conversation. Perhaps we can trace the thought back, suggestion by suggestion, to its source; again it seems to have arisen spontaneously, a plant of foreign birth in alien soil, springing, as were, from a seed dropped by a wild-bird flying over from another clime. Is it possible that it has been wafted by thought-waves floating from another congenial mind that mingled in its inner workings a memory of our needs?

How far, through what extent of space, mind has power upon mind, we know very little. There are several well-attested and authenticated instances of persons about meeting a sudden and violent end flashing their death-thought into the minds of distant dear ones; and undoubtedly persons who have a strong mutual attachment, strong wills, and great personal magnetism, may influence each other mentally, though separated. Whether the distance may be limited or limitless is another unanswered, perhaps unanswerable, query.

That two people in the same room may in-

fluence each other without any oral communication is a well-known fact. Those about us who care to possess the knowledge, are generally acquainted with our prominent thoughts and opinions, even if every pains is taken to conceal them and no outward sign is made. If they are not sufficiently *en rapport* to understand us at first, they will know something is concealed, and will mope around until the truth is discovered.

People usually deceive themselves who think they have safely hidden any great secret in their own breasts. If it is something vital, important, it will occupy the mind, and will be betrayed to intimate friends and acquaintances. They who are habitually reticent upon all subjects can best conceal thoughts and motives, because they furnish less clues, less telegraph-wires whence any operator that chooses can "take off" passing messages.

Another common experience is expressed in the sayings quoted. We may not have thought of absent friends for months, may not know they have any intention of coming, when all at once a thought of them flashes into the mind, and in a few hours or moments they are with us. Any particular form of thought does not seem to be communicable, only the main idea, and the passive mind is rarely conscious how it obtained the thought; rarely ascribes it to

its true source ; indeed, generally attributes its knowledge to having learned it from surrounding circumstances.

Were it not for this fortunate mind-blindness, which causes us to see " through a glass darkly " into the ever-open windows of our fellow-mortals' minds, this glamour of uncertainty whether we have not imagined that our thought is theirs, familiar intercourse would be far less satisfactory than now in some respects, while in others it would be more enjoyable. Many

people hide away much that is best of themselves in the recesses of their own souls ; others hide all that is worst, exhibiting the best.

It is evident that modern research has made every one better acquainted with his own nature and needs, and, consequently, given him a better understanding of human nature at large. Is it not possible that we shall continue to improve in this department of science till we shall at last " know as we are known ? "

AMELIA G. PETTIT.

HUGH STOWELL BROWN.

THIS eminent English clergyman is a large, strong, almost ponderous man. He stands six feet high, and weighs upward of two hundred pounds. He is built for power—power of body and power of brain. There is no attempt at

tionate, devotional, trusting, and just. Intellectually, he is both thoughtful and practical. He comprehends principles, and applies them in a matter-of-fact way. He understands human nature well, and knows how to mold the minds of men to



display in his manner, no affectation—nothing of the Miss Nancy—but a steady, strong earnestness which commands respectful attention, and makes him next to invincible. His nature is peculiarly mellow, kindly, affectionate, and inviting. He is sympathetic, friendly, affec-

his will. His mind is constructive ; he can make and use tools as the skilled mechanic, which he is. In language, he is always forcible, rather copious, and sometimes eloquent. Naturally modest, sensitive, and even diffident, he has acquired a comfortable degree of assurance

and self-reliance. Taken all in all, he is one of the best representatives of the great middle class of leading Englishmen. He is to Liverpool what our Beecher is to Brooklyn.

The accompanying engraved portrait, by no means a faithful likeness, is copied from a picture ten years old. The first time we met him was in 1860, at the opening of the Birkenhead Street Railway, near Liverpool, constructed by George Francis Train, the first horse "tramway" ever built in Great Britain. Mr. Brown was present, and, at the request of Mr. Train, made some hopeful and encouraging remarks on the event. Mr. Brown is soon to visit the United States, and when here we must try to retain him. We have not a few of England's best clergy now in America. Let us induce this "self-made man" to stay. Here is an outline of his life.

Hugh Stowell Brown was born in Douglas, the chief town of the Isle of Man, in the year 1823. His father was an Episcopal clergyman, and his uncle, the long celebrated Hugh Stowell, is also a minister of the Established Church.

The first fifteen years of his life were spent in his native town, at the grammar school, at which he received a good commercial education. For two years he was engaged in the business of land-surveying in England. He then repaired to Wolverton, one of the chief dépôts of the London and Northwestern Railroad, for the purpose of learning engineering. He addressed himself to his new employment with all the perseverance and courage which have marked him through life. Although a young man of less than twenty-one years of age, he drove a locomotive engine for six months. His prospects in his profession were of the most brilliant kind. He had every quality and qualification to become one of the first engineers of the day; but general knowledge had a charm for him which no amount of professional engagements could dispel. He was a diligent student, worthy to be ranked among the illustrious host who have pursued the quest of wisdom under what to other men were insurmount-

able difficulties. He was not simply a voracious reader of English literature; he also devoted himself to the acquirement of the classic languages. Many a time his Greek exercises might have been seen chalked inside the fire-box of his railway engine.

On reaching his majority he resolved to abandon all thought of secular promotion, and devoted himself to the Christian ministry. He became a student of King's College. In the course of his studies many difficulties presented themselves to his mind with regard to the doctrine of baptism as taught in the Episcopal Church. At length he was convinced that the baptism of primitive times was the only valid and Scriptural ordinance. His opinions on other subjects underwent a great change, so that he found himself, by conviction, a Nonconformist and a Baptist. Painful as the step was, despite the solicitous entreaties of friends and relatives, self-assured of the righteousness of his opinions, he left the church of his fathers to become a minister of the denomination he has ever since faithfully served and richly adorned.

The unworldliness of his motives and the humility of his character are shown by the fact that he did not seek a prominent position among his newly-chosen brethren. He wanted to work for the Master he loved unfettered, and was willing to toil anywhere and in any capacity in which he could do good. He labored for some time as a city missionary in Liverpool, gaining the love and friendship of many of the roughest and beforetime notoriously bad men and women of that great seaport.

During this time he frequently preached at the church of which he subsequently became the pastor. His eloquence and devotedness soon attracted attention and remark. In 1848 the Rev. J. Lister, the revered pastor of Myrtle Street Chapel, retired from a ministry of nearly fifty years' duration. The church extended a call to the city missionary, Hugh Stowell Brown, a procedure as wise as it was unusual and unexpected. It was accepted. The young pastor more than fulfilled the expectations of his friends. He attached to himself the old members as securely as their own long-loved former pastor had done, and gathered about him some of the strongest men of the city. Step by step he rose to

be a prominent minister in Liverpool, and to-day, after nearly a quarter of a century, he ranks among such men as Spurgeon, Chown, Vince, Maclarin, Aldis, and Brock—a genus of preachers unequaled either in the past or present history of the Baptist Church; men who combine the orator and the evangelist, the leader of public opinion and the pastor, the ripe scholar and the friend of the masses; men sound in doctrine, rich in gifts, plain of speech, revered by their immediate friends, and respected by all denominations.

In 1858 Mr. Brown determined to commence his now famous lectures to the working classes. Metaphorically speaking, as he found they would not come to church, he stepped down from the pulpit, tore off the white tie, locked the chapel-door, marched to the lecture hall, and said, "Now, my friends, just sit down and hear one of your neighbors talk to you exactly as he would by your own fireside. I don't come to blow you up or frighten you. I am not a priest intending to genuflect in all manner of grotesque ways to impose on or amuse you; I don't come even as a Christian minister to talk in the usual way about religion; but I come as a man who loves you and means to do you good in a plain, homely, brotherly manner."

The working men of Liverpool stretched out their homely hands to him in gratitude and welcome, while the Pharisees scowled on him and the angels of God underlined the Scripture, "This man receiveth sinners."

As many as 2,000 and 3,000 of this class, Sunday afternoon after Sunday afternoon, thronged the hall. Nor was the attraction simply the large-heartedness and geniality of the speaker; they felt he was doing them good. Many a man and woman was melted to tears or aroused to holy resolution as they listened. Never had any man greater power over this class. He comes right close to them and breathes into their very nostrils the breath of entreaty and warning, so that it becomes the breath of a new life to them by the power of the Almighty.

Hugh Stowell Brown is, in every sense, a *man*. There is nothing weak, petty, or vacillating about him. He has physical strength and mental capacity of such a sort, that he

does the work of a dozen ordinary ministers. I verily believe it is by the grace of God alone he has any sympathy for weaker brethren, or any compassion for the timid and wavering. He drives through life as he drove along the railroad twenty-five or thirty years ago, right ahead, majestically, leaving not only the go-cart but the fleet racehorse far behind. His force of character is extraordinary. His very presence breathes intolerance of indolence, lethargy, and fastidiousness. He is just the man Paul would have loved—just the man to have done as Paul did when he sent John Mark to his mother because he grew homesick and half-hearted in his work.

As a lecturer on general subjects he is most popular throughout Great Britain; as a preacher on special occasions he is always in request; as a platform speaker he is powerful and effective; as a pastor he is assiduous and beloved; as a minister he is followed by all classes, and recognized by his own brethren as one of eminent gifts and intrinsic worth. In a word, he is a massive, eloquent representative of the English pulpit.

WAS IT A DREAM?

BY MRS. C. A. MUNSON.

"I NEVER could believe such yarns, Nellie, never! It's all superstition!"

"Call it what you please, cousin, but you must admit there is an influence in the world of which we know very little."

"Yes, Nell, ten thousand if you choose; but no goblins or second-sight for me. I'm too 'matter-of-fact,'" said the young lady, elevating her voice, causing Mrs. Lawrence, who sat reading near the window, to lay down her book and gaze thoughtfully at the girls.

"There!" exclaimed Annie, "you see we've disturbed Aunt Milly, so we may as well 'subside'."

"No, dears, I'm not disturbed, only interested. I've been listening to your conversation, and your little stories have called up memories of which I seldom speak; incidents connected with my lost Edward. You both must remember hearing he was drowned."

"Oh! yes," exclaimed Nellie, "we were both at Grandma's when the news came. Six years ago, I think."

"Yes, dear, six years ago last month. We lived in Boston then. Edward had been ordered South by his physician, for he had a troublesome cough. He had been gone during the entire winter, and I was hoping to see him very soon, when a letter came telling us he had decided to take a voyage to the Pacific coast, which would keep him away from us several months longer."

"That was hard, Auntie," said Nell.

"Yes, child, a great disappointment; and the weeks seemed so long, for Emily was away that year, in Montreal, you remember. Your Uncle was not well, and he made a habit of retiring early. So my evenings were pretty lonely. One evening I had been reading till a late hour. I remember it was 'Adam Bede' that interested me, and I sat up to finish it. I went softly up stairs, and endeavored not to wake your Uncle, for I knew he was tired. I extinguished the gas, and had just laid my head on the pillow, when the room was filled with a most brilliant light. Feeling sure I had left no light, my first impression was that the house was on fire. I rose hastily from the pillow, and saw Edward standing in the door."

"Oh! Aunt Milly! How did he look?" exclaimed Annie.

"Just like himself, dear, except that one arm seemed to hang lifeless or disabled; the other he extended in a sort of pleading manner toward me."

"How did you feel, Auntie; were you frightened?"

"I was astonished, not exactly frightened. I cried, 'Edward!' and then I awoke your Uncle, telling him Edward had come. He started up, and then all was dark. Of course, he said I had been dreaming."

"And so it seems to me, Auntie," replied Annie.

"Well, Annie, I'll tell you what followed, and then you may call it a dream if you choose. Your Uncle fell asleep directly, but I could not so readily dispel the impression I had received. I could not, in fact, close my eyes, and after hours of watchfulness I rose and went to my sister's room (she was visiting us then), and told her what had happened. She, patient soul, listened to all I said; then she rose, saying, 'What day of the month is this?' I told her it was the fifteenth, and she penciled it in her note-book, then advised me to go to rest. I went to my room, but no sleep visited me during that long night."

"What happened after that, Auntie?"

"After that, my dears, the days were sad, and the nights long, for I had the impression that my Edward was ill, or dead. Your Uncle would listen to nothing I said about my 'dream,' as he seemed determined to call it. About seven weeks later my husband received a letter from Captain Newton, of the brig Alice, telling us the dreadful news that our 'son was lost overboard on the night of the fifteenth of August, in a gale, the sea being so heavy and the vessel under such headway it was impossible to stop.'"

"Oh! Aunt Milly! I never heard that before!" exclaimed Annie.

"No, darling, for ever after, while your Uncle lived, he was unwilling I should speak of it."

"What a strange thing it is!" said Nellie.

"Yes, child, and the strangest of all I have still to tell you. You remember I told you one arm seemed helpless. The captain wrote that 'it appeared as if he had an arm broken by his fall, for in the glimpses they had of him he seemed to strike out *with but one arm*.'"

"Oh! Nellie, I never heard anything so wonderful!" said Annie.

"You have heard many things, no doubt, just as wonderful, but they did not come home to you like this," replied her Aunt.

"That's just the case; Aunt Milly is the soul of truth, and I'll never talk so again. I am only wondering whether it was a dream."

THE SECRET

BY STORMY CLIFT.

The robin just told her lover,
The wind caught up the refrain,
And told the bee in the clover,
Who whispered it once and again
To wild-wood and garden flower,
To the heart's-ease upon the lea,
To the ivy upon the tower
Of the castle beside the sea.

A leaf on the waves, white-crested,
Like an emerald floated away,
And neither paused nor rested
Till night on the waters lay.
But a lily, in fragrant dreamings,
Asleep in the sea's embrace,
Awoke and read the secret
In the glance of his beaming face.

Her perfumed prayers uplifting,
She kissed the sea of blue,
In her pure glory drifting,
To death she passed from view.

But the mermaid caught—the glory
That glowed in her raptured eye—
From her fainting lips the story
Which made her joy to die.

* * * * *

Safe hid in a ruby sea cave, a star-fish heard the tale;
He flashed through the circling waters, nor paused for
the wildest gale,
And wherever he sailed, like lightning the story flamed
and glowed,
And Neptune listened and told it, in the gloom of his
dark abode.

Then gnomes sped away to the ice-land, where, with
spears and glittering shields,
They traversed the crystal desert and swept o'er the
snow-white fields
Till they reached where the clouds of midnight
Touched the pole with Erebus-hands,
Where known and unknown uniting
In the region of mystery stands.

The clouds, as they listened, grew darker, till a flash like
a river of light,
Proclaimed Aurora-borealis the queen of the northern
night;

Then her "army with banners" went marching down
the fields of unlimited space, (space—
And so, in that aerial journey, the secret was carried
Was carried to stars and planets,
And whispered through earth and air;
It flashed in the summer lightning,
And blushed in the rosebud fair.

The secret! Man never may know it,
'Tis a wonderful, wordless song
Which Nature teaches her children—
To her realm does the secret belong.
Perhaps 'tis a voice of thanksgiving
To Him who creates by his word,
A voice from Eternity's fountain,
By sin-deafened mortals unheard;
We know only this, wordless anthems,
Through Nature, must reach Nature's God.

Department of Our Social Relations.

Domestic happiness, thou only bliss
Of paradise that has survived the fall!
Thou art the nurse of virtue.

THE VOICES OF THE DEAF.

SPEECH is originally the result of hearing, and it is curious to trace the errors into which the human voice is led when, suddenly deprived of the guiding power of the ear, it tries to assert itself independently of it without previous preparation.

The untrained voices of those who lose hearing suddenly are as men who all at once find themselves without light in some underground labyrinth, and who wander about bewildered, and unable to discover any clue which shall lead them out to the day.

For the hopelessly deaf there is no antidote to this state of perplexity, save the assiduous cultivation of the nerves of feeling in connection with a certain mysterious instinct which makes it serve them for ears as it does the blind for eyes. Such must learn to feel their own voices, and through feeling them be able to regulate the pitch, the force, and the modulation of their vocal efforts. This requires a course of systematic training in all cases where the deafness is total or very nearly so. All will have remarked that the voices of those who have become deaf at an early age, and of those who have been long so, are

more or less unnatural. This is for want of necessary training after deafness comes on. But it is, above all, because the deaf do not know how to breathe for conversational purposes; they breathe for vital purposes only. Breathing in order to speak and in order to prolong speech is an altogether different matter from breathing merely that you may continue to exist. The ear in a hearing person directs conversational respiration in a manner so instinctive that we are not aware of the process till our attention is called to it in noting the sad results which its cessation, in those who have no longer the ear to guide them, produces. In such cases the defective breathing interferes so much with speech as to make it almost unintelligible, even when the articulation is good. I believe this difficulty occurs simultaneously with sudden, total deafness. The deaf forget to fill the lungs before beginning to speak; the consequence is a shrill, shallow tone in many, especially in women. They go on talking in an absolutely breathless manner; and this feeling of being out of breath causes them to hurry on as fast as possible, instead of stop-

ping to take a full breath. The breath comes and goes in little gasps and puffs all the time, till exhaustion causes them to stop. There is a feeling of distress across the upper part of the chest, and the habit persisted in will seriously impair the lungs in time. The state induced is to some extent equivalent to broken wind in horses.

Perhaps the most striking instance that we have on record of a person becoming totally deaf at an early age, and retaining speech throughout life without the aid of any after training, is the case of Dr. John Kitto, the celebrated English Biblical author. Since I gave the results of training in my own case in the three articles entitled, "After Years of Silence," in *Hearth and Home*, some persons have published their convictions that no especial training is needed in such instances, and Dr. Kitto has been cited in defense of their assertions. I am therefore going to show by the quoted testimony of himself and his friends just what sort of a voice Dr. Kitto had. A few words first to those who do not already know who he was.

The son of a poor and intemperate laborer in a small English town, he was of Cornish descent. He was naturally a sickly and feeble child, and early evinced a strong love of books. When about thirteen years old, one day while ascending a high ladder with a hod full of bricks on his shoulder, he stumbled on the topmost round and fell to the ground. He was almost killed, and sustained some internal injury of the head, from which he never fully recovered. The fall also made him totally deaf, the drums of both his ears being bursted. For several years after this he led a sort of vagabond life, having no means of communication with others save by writing. He was not made aware of the existence of the finger alphabet till he had been deaf six years. He was at last put into the workhouse of the town by some charitably disposed people who did not like to see him wandering about half-starved and half-naked. There he was set to learning the shoemaker's trade; but as he evinced unusual desire for mental improvement, he was allowed some privileges, among which was the frequenting of a library. He was taken out of the workhouse at length to be appren-

ticed to a shoemaker, who treated him so badly that the authorities interfered and canceled the indentures. Some gentlemen who were interested in him took action subsequently, and he went to learn dentistry with one of them. But this project was abandoned still later when his religious convictions became stronger, and he was set to learn printing by a missionary society, which eventually dispatched him to one of its stations, Malta. But he did not give satisfaction to his employers, nor they to him. He returned to England, and after casting about for some time for employment, he accepted the position of tutor to the little sons of his old master in dentistry, Mr. Grover, now turned missionary, who was going out to Bagdad. He remained in the East several years, and then severing his connection with Mr. Grover returned to England, and became a writer for the weekly literary press, contributing mostly papers of travel to the *Penny Journal*. He next began to be connected with Biblical literature, in which he soon became remarkable, and which he was specially fitted to illustrate from his familiarity with life in the East, and his great love of the subject. His writings are voluminous, and he was a most intense worker, his work-day averaging sixteen hours. He had the degree of Doctor of Divinity conferred on him by a German University, though he was a layman, on account of his great services in the department of Scriptural literature, and was also made an F.S.A.

He married soon after his second return to England, and had ten children. He died at the age of fifty-four—or, rather, I should say, he deliberately killed himself by over-work, which it did not seem as if he could avoid, his large family being altogether dependent on the proceeds of his pen.

Dr. Kitto never had any training for his voice after he became so totally and suddenly deaf. For a few years afterward he discontinued the use of it altogether, and had fallen into the habit of communicating only by writing. This feeling of constraint and dissatisfaction in the use of speech is common among those who become deaf while young, and leads them in most cases to abandon it altogether when they do not receive proper encouragement and training of the vocal

powers. Dr. Kitto was saved from becoming entirely dumb in the following manner :

"When I first went to the Mediterranean," he says, "the companions of my outward voyage were Dr. Korck, a German physician, who had lately taken orders in the Anglican Church, and Mr. Jadownicky, a converted Polish Jew, lately arrived from America, where he had been completing his Christian education. These well-informed and kind-hearted men being always with me, soon perceived how the matter really stood, and after much reasoning with me on the matter, they entered into a conspiracy, in which the captain of the ship joined, not to understand a word I said, otherwise than orally, throughout the voyage. In this they persevered to a marvel; and as I had much to ask, since I had not been at sea before, I made very great progress with my tongue during the six weeks' voyage, and by the time we reached our destination had almost overcome the habit of clutching at a pen or pencil to answer every question that was asked me. From this time I usually expressed myself orally to those whom I knew in the ordinary intercourse of life; but when my communication required many words, it was usually conveyed in writing. This also I at length dropped, and strangers only were addressed in writing. Finally, I ventured to accost even strangers with the tongue, and it was only when not understood that I resorted to the pen. At first strangers could rarely understand me without much difficulty, but under the improvement which practice gave, my voice was so much bettered that the instances in which it was not readily understood gradually diminished; and at the present day I rarely find even a foreigner to whom my language is not clear."

Again we find him alluding to his speech in his journal kept while traveling in the East. At the time spoken of he was going through the desert with a caravan.

"Before we lay down Mr. N. conversed with me about pronunciation and meter. He thinks I speak better than could be expected of one deaf so long; but among other faults he endeavored this evening to teach me to enunciate the final *L* distinctly. When initial, he says, I can do it well enough. I am afraid, however, that in this case the best

theoretical instruction will have little effect on my practice."

'The following is his fellow-travelers' description of his speech: "It is pitched in a far deeper bass tone than is natural to men who have their hearing. There is in it a certain contraction of the throat analogous to wheezing, and altogether it is eminently guttural. It may be suspected that this is attributable to the fact that his deafness came on in boyhood, before the voice had assumed its masculine depth. The transition having taken place without the guidance of the ear, was made at random and without any pains bestowed upon it by those who could hear and correct it. His pronunciation is generally accurate enough as regards all such words as young boys are likely to be familiar with, and as to others which closely follow their analogy, but is naturally defective in respect to words of later acquirement."

Further on he refers to the impression which he made on the natives in the matter of his speech, from which it is to be inferred that even they could perceive some peculiarity about it: "One man told me by signs, imitating my stoop and other infirmities, that I was a little, crooked, deaf, *dumb*, good-for-nothing fellow."

Describing the unearthly sort of a noise he made when speaking in the open air, he represents people as starting and staring in astonishment, and he adds that in the Burlington Arcade (London) "the preternatural rumble of his voice is heard afar off."

When he read aloud to his wife, "the deep and unvarying bass of his guttural tones, prolonged for hours, often set his sole auditor to sleep." "Were I again in Persia," he merrily exclaims, "it would be in my power to realize a handsome income by the exercise of a gift which is only there well appreciated. It throws into the shade all the boasted wonders of the mesmeric trance to behold the gradual subsidence of my victim under the sleep-compelling influence of my voice, in spite of all her superhuman struggles to avert the inevitable doom."

That his assertions about making himself understood by everybody are not to be taken literally is proved by the testimony of his wife, who says:

"Most of his friends, though they might

enjoy hearing him talk—that is, the few who could understand him”—etc.

That he never used speech with perfect ease after his accident is proved by his biographer's remarks: "After his fall he became more and more loth to speak, till his friends during his voyage to Malta forced him, and through life he made no superfluous terms, avoiding all remarks about the weather, all expletives, adjuncts, and complimentary phrases, and even terms of endearment." He himself says he could never get into the habit of using contractions, such as "can't" for can not, "don't" for do not, etc.

And that his voice was not satisfactory in general society is to be inferred not only from the remark of his wife, already quoted, but from his own confession when he says: "I feel more and more every day that it will never do for me to mix in company. At the best a deaf man must always cut an awkward figure in it."

This shows how limited and unsatisfactory his means of intercourse must have been in every way. Speaking of his voice and of the effects of his deafness upon his literary work, his biographer says:

"His sentences sometimes want rhythm. The clauses are occasionally rugged, and his manuscripts exhibit a word or an epithet recurring in contiguous members of the same sentence. He had lost so far the feeling of sound, and his eyesight could not guide him. His poetry exhibits this curious defect of 'halting, hopping feet,' and he admits that he could not recognize and rectify it, and that he had always a misgiving on the subject. . . He was liable to pronounce words as they were written, and as he brought out all the syllables, German strangers, having some acquaintance with English, usually understood him better than his own countrymen."

The last sentence should be compared with Kitto's own description of his voice as he fancied it to be. His shyness of strangers was doubtless due to the little pleasure which he had in using his voice. In later years intercourse with any but his family and one or two friends was almost altogether abandoned on account of this difficulty. He speaks, too, of his "labored asthmatic breathing," which was doubtless owing to his inability to breathe in a proper manner while convers-

ing. He could not read the lips, and often complains of the irksomeness of holding conversations in the finger language.

Yet this man was the most striking example that we have on record of speech being maintained through life in spite of entire deafness and without any especial training. I think I have proved how unsatisfactory he found it to be. Now, had he been able to have proper elocutionary instruction, such as is peculiarly adapted to the cases of the deaf, I believe his voice would have become a pleasure to him, and the most valuable of all means of communication, instead of being, as it so often was, a snare and a vexation, and a means of increasing his shyness by drawing all eyes upon him.

I therefore reason that in the cases of all those who have learned to speak, but who are too deaf to control their own voices through the ear, a certain course of discipline and practice is essentially necessary to prevent them from losing, wholly or partly, the intelligible use of speech. And the sooner this is commenced the better, since wrong habits of voice are among the most difficult of all to conquer. This would also prevent that loss of *the feeling of sound* which spoiled Kitto as a writer of verse.

He had forgotten, too, how voices and things sounded. "Does she make a noise? Pray tell me what sort of a noise she makes," he says to his wife, so pathetically, when watching the babyish ways of his first child.

For myself, though I became deaf when about eleven, I have a distinct recollection of every sort of sound which I heard previous to that period. I know how the wind sounds among the trees when the leaves are on them and when they are not. I know its low whisper among the deep grass. I know the hollow murmur of the sea, and how music sounds across water. I know the sound made by every tame beast and fowl, and the twittering of the birds. And I can often tell what sort of a voice a person has, without knowing how I do it. Yet I have never heard a sound since my ears were first closed.

HOWARD GLYNDON.

THE Cleveland police picked up a man a day or two ago in the streets, who appeared to be laboring under great mental distress; but,

on applying soothing remedies, he came to himself and explained matters. He said that when he left his happy home early in the morning his wife kissed him good-by, as is her custom when she wants any errand performed, and then asked him to "go to the dressmaker, and tell her that she (the wife) had changed her mind, and would have the watered silk made up instead

of the poplin; and be sure to tell her," said the wife, "that if she thinks it would look better with ten bias flounces without puffing, and box-plaited below the equator—which should be gathered in hem-stitched gudgeons up and down the seams, with gusset stitch between—she can make it up in that way, instead of fluting the bobinette insertion, and piecing out with point applique, as I suggested yesterday."

REST AND RECREATION.

BY ANNA CLEAVES.

"IS it possible that pale, care-worn looking woman is Ellen Smith, the once gay, rosy-cheeked companion of my dancing school-days?" I inquired of a friend, as we turned away from the door of a neat cottage where we had been calling on its inmates.

"Yes," she replied, "that is Ellen; but remember you have not seen her for some years, and you know she is married now and has a family of three children."

"And an unsympathizing, worthless husband, I'll be bound!" I rejoined.

"Ah! there you mistake," said my friend; "he is one of the most industrious, kind-hearted men we have in the village, always to be found at his own fireside, and ever attending to his own business; a perfect model of a domestic husband, I can assure you."

"And I suppose Ellen is what you call a perfect model of a domestic wife," I replied; "well, if the husband looks as careworn, sorrow, and spiritless as the wife, I am very thankful that I am not on the list of your perfect models of matrimony. From Ellen's appearance one would suppose she never allowed herself a moment's recreation in her life, or even took the time to indulge in a good, merry laugh. Perhaps she has not much to laugh at; yet I believe that each individual, to a great extent, makes his or her own world, and can either tint it with brightest rose color or shade it with the despair and gloom of midnight. When you tell me the husband is never seen elsewhere than at his own fireside, which may be quite proper in its way, you might have added the wife is never seen elsewhere either; and here lies the secret of the pale, spiritless face."

"Cage a young, joyous robin and deprive it of its wonted liberty and the pure, fresh air of heaven, ten to one but the poor bird dies, no matter if it is petted and caressed by its owner."

"How, then, can men and women live caged

all their lives in the endless round of fatigue and labor without recreation of some kind? We are all children in spirit from the cradle to the grave, or should be, if we would spend life happily; and it is as necessary to a healthy mind to be surrounded by cheering influences as is nourishing food to sustain the body."

"Poor Ellen! It is really sad to see how all the light and joy have faded from her face. Well do I remember to have seen her, when a girl, practicing her dancing-lessons on the hearthstone of the old kitchen fireplace, to the great delight of her grandmother, who, seated in her arm-chair, with love and admiration depicted on her countenance, would watch the performance by the firelight, and declare, 'There never was so graceful a creature in all the world as her Ellen!'"

"I wonder what the poor old soul would say now to see her weighed down with care and toil, until there is scarcely the ghost of Ellen Smith left!"

"Well," interrupted my friend, "how can a woman with the cares of a family, and with only the one pair of hands to perform the duties of nurse, seamstress, and housekeeper, find time for recreation? When she has finished the day's toil, nature, completely exhausted, craves rest; and, necessarily, one half of such a woman's life is spent oblivious of everything but its cares."

"True," I replied, "but it is civilization and fashion which impose many useless burdens upon us; and it is generally conceded that our imaginary wants far exceed our real ones. How many young married people ruin their prospects for life by striving to keep up a false appearance, and aping the fashions of the day! And many a mother spends half her life ruffling and embroidering garments which in reality do not add one iota to the beauty of her child's face, while every stitch she takes may be drying up her very heart's blood!"

'Nonsense!' says such a mother; 'sewing and confinement in-doors never injure me. In the forepart of the day I work about the house, and in the afternoon sit down to sew, and it quite rests me, I can assure you.' So, doubtless, thinks Ellen Smith; but I would say to such mothers, if they would only devote half the time spent in such useless occupations to the improvement of their own and their children's health, in taking daily ablutions and proper out-of-door exercise and mingling with cheerful, intelligent company, I am certain there would be more happy hearts in the world, and by far less pale, careworn faces, and, instead of our lives being spent amid ignorance and the darkness of despair, rose-tinted clouds, radiant with hope and happiness, would ever beam upon our pathway."

"Your preaching is all very good," said my friend, "and your rose-tinted clouds very beautiful, but suppose a wife who is obliged to sustain all the care of her house and family does that only which is *necessary* for their comfort, think you it would not be enough to pale her cheeks and leave the lines of care upon her brow?"

"Perhaps it would; much depends on one's constitution and temperament," I replied. "To such women I would say, if you must work, have some order about it. Even the daily routine of household cares may be made comparatively pleasing and interesting. We all have a mission to perform in this world, and whatever it is let us do it cheerfully. Don't fret; don't cry; it will only add to the wrinkles on your brow and make things worse, and your influence will imperceptibly affect those around you. Who ever knew a mother to be sick, peevish, or irritable, but that her children caught the contagion? Nothing makes us more miserable than to be continually dwelling on our own troubles. Shake care and trouble off as you would some terrible animal that was about to devour you. When everything seems to go wrong, and the children all have a cross spell, shut up your house, turn your back upon all vexation, and take your children to the park, to the woods, or the beach—anywhere away from the scenes of your annoyance—and spend a half-holiday. Even the sight of other faces will oftentimes divert the mind from its despondency, and you will return home—"

"All beat out," interposed my friend, "with children crosser than ever, no fire, no supper, and everything undone, and wish to mercy you had remained at home."

"That depends upon yourself," I argued, "and is just as you color your sky; let the children understand beforehand that they are to be content with a simple meal, and be content with one yourself. Fresh air and healthy exercise are enemies to weak and dainty stomachs."

"But the husband!" again interposed my friend; "how will he like your simple meal?"

"If he is a loving father and kind, considerate husband," I replied, "he will be so rejoiced to see the bright, smiling faces around him, that he cannot but be satisfied with anything which tends to make those whom he truly loves happy. If there is no goodness nor manhood about him, even the simple meal is more than he deserves."

Without rest and recreation there can be no real happy homes, no rosy cheeks, nor smiling faces. Relaxation from toil and care arouse the energies, quicken the perceptions, and give one renewed vigor to will and purpose. Even the little hands, through its influence, will be stimulated to new efforts, and soon they will be as busy as mamma, and take pleasure in assisting her to set things in order with the promise of *another* holiday.

It is these bright things ahead that we should look to, and teach the children to look forward to. If they never come, surely it is time better spent than sitting with troubled hearts and wrinkled brows peering into the darkness, and ever brooding over our cares and sorrows.

THE MAN OF CHICAGO.

"BEFORE the fire," no man was more hopeful, enterprising, or jubilant than the Chicago man. Here is his picture painted to-day by a correspondent of the *Boston Globe*:

"In but one respect a change is apparent in the representative man of Chicago. Immediately after the fire he seemed to laugh at his calamity, to look upon it with a cheerful spirit. He was like our new recruits who went to the war. They passed down to the field of trial with cheers and shouts and waving of banners. Now he has settled down into a calm, almost dogged resolution to hold on and succeed, or die. He goes to his task silent, sad, persistent, like the veteran soldier who went into the fray knowing its meaning and determined to conquer. These men will conquer; they

will restore their city, and many of them will rebuild their fortunes; but scores, hundreds of them will do it at the price of their lives. There are indications even now of overtaxed minds and brains. Some will go down to death before they see the new city standing in its glory, and others will drop out of the ranks soon after the victory is proclaimed, and drop into early graves. We glory in their pluck, their enterprise, their brave, strong hearts, that will not succumb to adverse fortunes, and yet we are sad in contemplating the results of this long overstrain of muscle, brain, and heart."

[The Chicago man may die—all men die—

but he will rise again. Fire purifies; trials call out and develop the true man; where one leaves off another begins. The principle of resurrection pertains to all life, vegetable and animal; water evaporates, is converted into rain or snow or hail, and again into water. Recreation is still going on. We must not stimulate, strain, or go too fast. Chicago is not the place in which to put on the brakes or go slow. Push, push, push, is the word there. The Chicago man should remember that

"Too much care makes a young man gray,"

and

"Too much care turns an old man to clay."

LONDON JEWS.

BY N. S. DODGE.

I WRITE from the Barbican, a spacious London thoroughfare connecting Finsbury Square with Aldersgate Street. Close by are Bevis-Marks, Houndsditch, St. Mary Axe, and Petticoat Lane. Passing through any one of these dingy lanes, the traveler might easily imagine himself in Frankfort, Warsaw, or any other place containing a large Jewish population. Every face is of curvilinear outline—every brow penciled in an arch of exact ellipse—every nose more or less conforming to a standard better known than easily described—and every head of hair bushy and black as Absalom's. Within this area Isaac kills beef and mutton according to the old dispensation, Jacob receives accidental silver spoons, and consigns them to the crucible; Rebecca disposes of fried liver, smoking hot, on burnished copper platters; Moses and Aaron keep marine stores for every earthly thing furtively acquired, Ruth deals in oranges, Melchizedek in Hebrew tracts, Absalom in Turkey rhubarb, and Mordecai in opium. Nothing is to be seen, above, below, around, but Jewish faces, houses, and occupations.

It is from this quarter of the great metropolis that more than seven hundred purchasers of cast-off garments start upon their business five mornings of every week. There is not a street in London they do not traverse. From five to seven o'clock in the east end, and from eight to nine o'clock in Mayfair, Belgravia,

and Bayswater, in the west end, you cannot miss these bagmen, keeping close to the area railing of the houses, and uttering their low monotone, "*Clo', clo',*" intended to be heard by the servants, and not overheard by master or mistress. At 3 p. m. of these five days—for they observe Saturday out of respect to the Hebrew law, and Sunday out of compulsion by the Christian—the streets leading out of Houndsditch, through St. Mary Axe to the Old Clothes Exchange, are black with the returning crowd of these seven hundred. All have bags on their backs, and many boots strung on their shoulders, and pyramids of hats on their heads, as they pay Barney Aaron, the janitor, the ha'penny toll, and pass through the gates into the broad area of "Rag Fair," as the Exchange is styled—whose compound of mustiness, arising from dank clothing and mouldy upholstery, decaying leather and mildewed bedding, scents the whole neighborhood. These thronging wayfarers are the hucksters of tattered garments. The buyers are already within the Exchange—eager old men in greasy gabardines, sharp hawkers with bejeweled shirt-fronts, and slop-shop women flaunting in gay colors. Watching the in-comers, with whom they are more or less acquainted, they seize them by the arm, and feel the contents of their bags. "Ha! you cot any preakin'?" [old pieces] cries one who buys old coats to cut into cloth caps. "Cot any fustian, old

cotash, or gloves?" asks another. "You know me," wheedles a third; "I'm little Ikey, the pest of puyers, and always gives a goot prishe!" Thus the bartering and sale goes on. From the middle of the afternoon, which is high-tide at Rag Fair, till the bell sounds for shutting up at six, tinkers, umbrella-menders, bone-grubbers, old-clo' men, and costermongers, as sellers, alternate with Swiss Jews and English Jews, German Jews and Greek Jews, as buyers, chaffering, whining, and coaxing with the utmost eagerness.

The closing of Rag Fair is high-noon in Petticoat Lane. This is the *bas ton* of London. It is not far off. Having seen it once, you know it forever. Its gutters are gray; passages bubble with soap-suds; slits of blind alleys, in which old blankets and ragged drapery are hung out to dry, open as you pass along; barrows block the sidewalks; vapors of fried fish taint the air; and fluffy-haired Hebrewesses, with gold ear-rings dangling on their necks and gorgeous rings hooping their fingers, are seated in the door-ways. Artificial flowers and soiled ribbons, carpenters' second-hand tools and the worn implements of every other trade, half-destroyed harness and broken furniture, babies' clothing and kitchen utensils, paintings, books, screens, parlor-ornaments, articles of *vertu*, damask hangings, and chipped china-ware, are offered for sale on every side. The beds, pillows, mattresses, under-clothing, embroidery, lace, dressing-cases, toilet articles, and choice boudoir appliances that find their way to Petticoat Lane are suggestive of the straits that unforeseen poverty brings. The sellers are all Jews. The buyers are Gentiles, attracted here—poor mechanics, needy tradesmen, under-salaried clerks—in hopes of purchasing at half-price.

Better, perhaps, than anywhere else there is shown in Petticoat Lane that singular characteristic of the Jewish race that makes it, in every part of the world, the consumer, never the producer, of a manufactured article. There is not a thing on sale made by a Jew. He will repair and restore, renovate and disguise, but manufacture never. In all the street there are no artisans. Every door opens upon merchandise—every householder is engaged in buying or selling. Some of these dealers are rich, and will leave no end

of money to their Ruths and Rachels, when they are gathered to their fathers.

Among the 90,000 Jews in London there is not a beggar. This is the boast of the race. It is said to be equally true of the Jews everywhere. The statement has been denied, but I heard the great banker, Solomons, re-affirm it last year at a public meeting over which the lord mayor presided, and challenge a single instance to the contrary. It is certainly true in London, that while the Hebrews utilize every possible commodity—while they will buy, sell, receive stolen goods, and be everything and do everything for a living—they never beg. The truth is, that their activity and enterprise instinctively unfit them for lazy mendicancy. As they made themselves masters of the commerce of the Middle Ages by their industry and shrewdness, so they now, through the same qualities, hold a monopoly of various employments. They are the large dealers in pearls and diamonds in-the-rough; they control European traffic in the dried fruits from Asia Minor; they farm the hostels and post-routes of Russia, and they are the money-changers of the whole world. The trade in old linen, by which, in time of war, fortunes are often made, is entirely in their hands. The purchase of horses, mules, and camels from the Arabs and Moors fell into their control during the great rebellion in India and the war with Abyssinia. The vast operations in cotton as our armies, during the late war, advanced into Southern territory; the exchange of products at the great annual fairs of Leipzig and Frankfort; the carrying trade of Moldavia, Wallachia, and Bulgravia; the border traffic with the Bedouins of Africa and Asia; and the purchase and sale of uncurrent money and doubtful securities—in each and all of which they are largely engaged—are instances of the sagacity with which the Hebrew sees, and the tenacity with which he holds, lucrative branches of commerce.

There is one kind of business in which certain London Jews engage, that, for strangeness, has not its like probably in the world; I refer to the discount of paper supposed to be forged. A nobleman's son, for example, wants a thousand pounds, and offers, as security for its repayment, his father's name. The money-lender knows very well that my

lord would be the last man in the world to send his son to *him* for a loan, and he naturally infers that the note of hand is a forgery. But he knows, also, that he can obtain a higher rate of interest than if it were genuine, and is far more certain that it will be promptly paid at maturity. He, therefore, discounts the perfectly worthless paper, and puts it in his safe, sure that the young blood will pay it if he lives, or, if he dies, that the father will do so to spare his son's memory.

It is in exchange and barter that the Israelite everywhere excels. He rarely produces. Into handicraft he seldom enters. Inventive genius is not his. Manufactures he generally leaves to others. Mechanical skill appears foreign to his nature. He is a poor operative, and a poorer household servant. Manual labor, where bread is to be won by daily wages, he avoids. Scorning no labor while he is his own master, he abhors drudgery for another. The best of commercial travelers, he is the poorest of counting-room clerks. Sharpest of buyers and sellers, he is the stupidest of contrivers. The Jew, as a rule, continues, but does not originate; accepts, but rarely organizes; finds a market, but does not create a demand; makes the best of every situation, but at the same time accepts it as the inevitable. Wherever money is to be won, however, by shrewd calculation; wherever speculative risk promises a fair return; or whenever an unsteady market offers large margins for profit or loss, his tact, calculation, and boldness have no equal. His judgment in an emergency is rarely at fault. The critical moment seldom escapes his notice. Scruples do not embarrass him. Conscience makes no coward of his venture. It thus becomes true that in every country there is a great Hebrew capitalist. When the allied armies, in 1815, needed money, the sovereigns had recourse to a Jew. When England wanted \$100,000,000 sterling for emancipation in Jamaica, a Hebrew furnished it. When the Crimean war rendered necessary an unusual loan; when Prussia, girding herself for her two great wars, required the sinews that made those wars successful; when Russian credit, after Sebastopol was in ruins, poised between solvency and bankruptcy; when England agreed to pay Austria and Prussia \$60,000,000 each as subsidies; and when Metternich, denied a

loan by the merchant princes of Frankfort-on-the-Main, appealed for a sum of money too large for all Vienna to furnish—it was in each case a Jew who came to the rescue.

I refer, in almost every one of these cases, to one branch or the other of the house of Rothschilds. Although the wealth of this firm is never estimated, its transactions with governments are matters of history. Since the peace of 1815 it has raised \$1,000,000,000 for Great Britain, \$250,000,000 for Austria, \$200,000,000 for Prussia, \$400,000,000 for France, \$250,000,000 for Naples, \$125,000,000 for Russia, \$60,000,000 for Brazil, and for smaller States more than \$140,000,000. The gains upon these transactions must have been enormous. Hence the impression, in all the monetary marts of the world, that the credit of the Rothschilds is beyond the possibility of damage. In 1857, when the financial storm that prostrated all confidence of man in man in the United States swept across the Atlantic, carrying havoc to bankers and merchants, ship-owners and manufacturers, iron-masters and bill-discounters, almost the only great house in Europe that stood unshaken by the tempest was theirs. I was at that time residing in England. For two or three days George Peabody's credit was gone. Baring Brothers looked out with dismay upon the wrecks floating around them. Brown, Shipley & Co.; Morrison, Dillon & Co.; Frederick Huth & Co., and other leading mercantile and banking firms of London and Liverpool, took in all canvas, and were striving to ride out the gale under bare poles. The Rothschilds, on the contrary, showed no change. Their extended business seemed to suffer no diminution. As loan-contractors, dealers in bullion, stock-brokers, and sellers of securities, they did as much during the panic—perhaps more—as ever. They kept their sails spread to the winds, and even when the Bank of England had to appeal to government for help, the Rothschilds moved onward without dismay. They lost \$40,000,000 by fall of securities in 1848, as much or more during the Franco-Prussian war, and \$2,500,000 by the funding of exchequer bills; but in not one of these cases was their credit touched. If anything on earth be exempt from disastrous mutation, it would appear to be the wealth of this great house.

As remarkable as the Rothschilds for wealth, was their kinsman, Sir Moses Montefiore, who died last year at the age of eighty-five, for philanthropy. Taking everything into account, there has not an Englishman lived since the days of John Howard, who, quietly and unostentatiously, had achieved so great results in relief of suffering and righting of wrong, as this noble Hebrew. Four times he went to Constantinople, twice to Damascus, six times to Jerusalem, and five times to Africa, to have unjust laws repealed and barbarous edicts against his race stayed, and was always successful. The aged Jews in Jerusalem were his beneficiaries for half a century. He founded schools, established lyceums, built synagogues, endowed hospitals, encouraged art, and rewarded merit everywhere among his people. At the age of seventy-nine he went on a mission of mercy to Morocco, in spite of the plague; and at fourscore and two years visited Roumelia, to relieve 12,000 Jews from a cruel persecution. His name became a synonym for goodness. The queen recognized it when she made him baronet for "his distinguished virtues," as did the Common Council of London when they voted him the freedom of the city for his "services in behalf of the oppressed throughout the world."

The Jewish race has been the contemporary of Egyptians, Assyrians, and Chaldees, of Goths, Huns, and Saxons, of Greeks, Romans, and Moors; and though the very type of most of these races is lost, that of the Hebrew remains the same as it was in the days of the patriarchs. His race appears never to have depreciated, physically or mentally. The most accomplished scholars, statesmen, jurists, and scientists of Europe to-day are men of Jewish descent. Some years ago I was present at a semi-centennial anniversary of English Jews held at the London Tavern. More than four hundred covers were laid. No better opportunity for passing correct judgment upon the physical condition of a people could have been afforded. The foremost Hebrews of every principal city in the three kingdoms were present; and, though I frankly confess that, after a twenty-five years' intimate association with Jews in every part of Europe, I do not like their physiognomy, I as frankly say that I never saw anywhere—

in the Houses of Parliament or French Chambers, in German legislative bodies or the United States Senate—a body of men who, in person and presence, in manner and bearing, were their equals.

His eager pursuit of wealth is cast in the teeth of the Israelite as a reproach, but circumstances over which he had no control created it. For more than a thousand years, during the Middle Ages, he was the spoil of every ruler in Christendom. He was tortured upon bare suspicion, and put to death upon slight provocation. Laws gave him no protection. To be the owner of houses and lands, to freight his own ships and pasture his own herds, only exposed him to jeopardy. Hence coin, or its equivalent in precious stones and bullion—something, in fact, that could be concealed till time of need, and then used to bribe his oppressor—was his only power. From this terrible discipline of ages comes what seems the Jew's intuitive knowledge of the value of jewels and the precious metals. The gold piece, no matter of what coinage; the diamond, of whatever setting; the pearl and ruby and topaz and amethyst and emerald, whether rough from the mine or polished from the workshop, are known instantly at their true value.

In the matter of education, the Hebrew race, wherever dispersed, has always been careful and liberal. Intelligence is its marked feature. In whatever class of society the Jew moves, he is never below its level. Amid all persecutions, under all bans, in every land, whether as exile or citizen, he educates his children. Hebrew schools in Tunis and Algiers, Asia-Minor and Hindostan, are the primary foundations on which Christian missionaries build for the future. In London there are seventy-two Jewish seminaries of learning, and nearly as many more in the provinces. Hunted by bigotry in Roman Catholic countries, and chased by Protestant fanaticism throughout Europe and even America—and what else than this is Associate Justice Strong's proposed amendment of the Constitution of the United States?—Jews have never, in their long history, found a quiet settlement, however temporary, without making instant provision for the education of their children.

In conclusion, let me mention a fact ger-

mane to the subject, and significant of the slow progress that reform makes in England. Baron Rothschild was elected one of the members to represent London in Parliament in 1847, and was re-elected in 1849, '52, and '57. It was not until the last-named year that he was permitted to take his seat. The oath of allegiance ran, "Upon the true faith of a Christian." This oath, as a Jew, the Baron could not take. Again and again, session after session, he advanced to the bar of the House of Commons, uncovered his

head, raised his right hand, slowly repeated the form after the Speaker until the fatal words were reached, when, becoming silent, and remaining silent during three repetitions by the Speaker, he took his seat outside the bar. For ten successive years an act, changing this oath, was sent from the Commons to the Lords, and was ten times refused concurrence. That conservative body would not do away with it. At length, by a resolution of the Lower House, the standing orders were set aside, and the Baron was permitted, as Jews now are, to take his seat.

BEAUTY.

Oh, tell me not that beauty's vain,
That it should claim no friend;
That loving hearts and gentle souls
With hideous forms may blend.
Say not that though that lovely face,
Lit up by pure blue eyes,
May speak a soul made callous quite,
By crime of deepest dyes.

Nor yet tell me the savage look,
The vicious, mean, or low,
May speak not of the inner man,
Since "nature made it so."
Nay, tell me not that beauty's vain,
That features do not tell,
As faces at the window-pane,
Who in that house may dwell. E. T. BUSH.

WOMEN IN THE PRESBYTERIAN PULPIT.

THE Presbytery of Brooklyn, N. Y., the Rev. Dr. J. G. Butler, moderator, has adopted an address to the General Assembly, prepared by the Rev. Dr. T. S. Brown, the Rev. Dr. J. G. Butler, and others, earnestly requesting it "to adopt and to transmit to all the Presbyteries for their approval, such rules as shall oblige all churches under their care not to license or ordain women to the Gospel ministry, and not to allow any woman to teach or preach in pulpits or in the public and promiscuous meetings of the Church of Christ." The request is made for the following reasons:

1. The function of woman is not to govern officially. She is to be a direct helper, never a principal, in the Church of Christ. She is a helpmeet for man. 2. Woman's function is not to teach officially. The prophets and writers and church instructors of the Bible were all men. There were no female apostles, presbyters, evangelists, pastors, nor teachers. There were no females among the seventy sent out by our Lord. There were no female bishops, and the "angels" of the churches were all men. 3. Government and teaching are inseparable in the church ministry, and both these func-

tions are prohibited to woman. 4. God has made woman subject to her husband, and "he shall rule over her." This position of woman, by the Divine decree, is absolutely irreconcilable with the prerogatives and functions of the holy ministry. If not, then the authority of the husband is above that of the pastor. 5. There is no instance in the Old Testament of the anointing of a woman to the prophetic office, nor to any of the ordinary functions of the ancient church. There is no instance on record there of any woman ever having been called to that office. 6. The Gospel commission from the lips of Christ himself to the whole New Testament ministry is to men, and men alone. 7. The proof—the subordinate and auxiliary relation of woman as found in the writings of Moses and Paul. 8. The express prohibition—for reasons universal and permanent—of the inspired Apostle.

Five members of the Presbytery voted against the adoption of this address.—*N. Y. Tribune.*

Is it proper for women to sing in public? Should she be permitted to practice medicine? Should she study or practice art? Should she study, teach, or practice naviga-

tion? Should she write religious books? If so, why may she not write and publish sermons? And if she may do this, why not preach them? Should woman pray in public? Is there any evidence that Christ ever objected to woman's doing any or all these things? Why doesn't our Sorosis, or other bodies of intelligent women, call a convention and issue a bull prohibiting men from practicing midwifery? or from selling needles, pins, tapes, and such like unmanly employments? Should a great, big, mustached six-footer take the place of a lady in a dress-maker's or milliner's shop, and devote his masculine talents to fitting ladies' dresses, trying on basques, chignons, high-heeled shoes, babies' frocks, nice, new bonnets, pretty silk ribbons, fancy tassels, hair-combs, finger-rings, and so forth? If these big-fisted fellows want to wash, scrub, churn, bake, clean house, empty spittoons, etc., the women will not seriously object. There are other standpoints from which this question may be looked at. One is this: There are masculine women and there are feminine men. There are women with powerful minds, capable of comprehending science, philosophy, government, religion, and problems of the ages. Shall these be excluded from any

sphere of action in which they may choose to engage? Is the question of sex to interpose barriers to woman's growth in grace or in a knowledge of God's laws? Is the distinction of sex known in heaven? Why may not woman do what she likes? Is man, indeed, her master, to lord it over her? How came he by this power? Is it on the principle that "might is right?" There were women who were judges in Israel. There were prophetesses. The time was when women and negroes were said to have no souls, and time now is when *some* men consider themselves responsible for the souls of their wives. Aye, verily, and this doctrine is not confined to the Church of the Latter-Day Saints. But shall we never outgrow such mediæval opinions and superstitions? Then what are we to do with those dapper little men of the bantam sort, who are too light for masculine thought or action? Are they to be forced into heavy thinking or heavy working? No! let *them* wash dishes and do chamber work if they will; it requires size and strength to manage a locomotive, steer a ship, or hold a plow. Then why not let men and women do what they can do best, whether it be teaching, preaching, buying, selling, cutting, making, or—what they like?

Department of Physiology—Our Sanitarium.

The truths of Physiology should be inculcated and enforced early and earnestly, and with the emphasis of high religious duty.—*Youmans*

ARSENIC; ITS HISTORY AND PROPERTIES.

BY M. M. W., M. D.

ALTHOUGH the mass of evidence goes to prove that the beneficence of God was the cause of the creation of many things that now subserve the necessities of man, human ingenuity has been none the less active in devising ways and means for human torture and destruction; and that, too, not unfrequently by perverting the materials that were intended for health and life. The beautiful flower and the lusterless mineral have each served its turn, and the glory of the one or the value of the other has been entirely obliterated by the terror that attaches to the general term POISON. Still, a fascinating interest attends some of these very substances, and, in

their proximity to our daily resources, it may not be amiss for us to bestow a moment's consideration upon them. *Arsenicum*, the metallic base of the poison *Arsenic*, was known in some of its combinations before the Christian era. Dioscorides, a Greek writer of the first century after Christ, called it *Sendarac*, a name it bore until its metallic properties were more clearly shown. The pure metal was found in 1694, but it was not much studied until 1733, when Brandt, who first showed us phosphorus, demonstrated the specific properties of the new metal. By some chemists arsenicum is excluded from the list of metals because its compounds are not formed according to the

strictest laws governing this class. But each domain of nature is separated from the next by lines that it is extremely difficult to trace; and the subdivisions are still less definitely limited. Properties belonging to two classes, properties possessed by neither, and the absence of properties peculiar to each, mark many individuals of a specified division, and the true classification becomes almost an arbitrary act of each individual student. Arsenicum resembles phosphorus in some of its chemical analogies, and once it was deemed a normal constituent of the animal frame; but more careful research has shown that it is never present in organic matter, except as the result of accident or crime. It resembles metals in luster, opacity and electrical conducting power. It occurs native as pure arsenicum, as an oxide, a sulphide, and as an admixture in other ores, particularly those of iron, zinc, and coal. The form that is most popularly familiar is the arsenic or arsenious acid, formed by the union of oxygen with arsenicum in the proportion of 150 parts (by weight) of the metal to 48 of the gas. It is a heavy white powder, with a sweetish taste, soluble in hot or cold water to some extent, and its vapor has the odor of garlic or onions. It is prepared from the ores, and this manufacture is largely carried on in the German-Austrian province of Silesia. The factories are built like towers, many stories high, but allowing a perfect communication from bottom to top. The process of preparation depends upon the volatility of the substance by heat. The ores are thrown upon burning furnaces at the bottom of the towers, and as the substance vaporizes it rises through the chambers above. As this vapor passes through the air it seizes oxygen, and is converted into an acid, which forms the "white arsenic" of the shops. This crystallizes on the walls and floors of the factory rooms, from which it is collected by the operatives there employed. This removal is fraught with very death! The workmen rarely live to pass the age of forty years, though every precaution is taken for their safety. When at work they are closely enveloped in a leathern garment which covers the entire body, hands, feet, head, and face. No opening occurs throughout its entire extent after it is fastened on. Vision is permitted through plates of glass set in before the eyes, and breathing is carried on through a moist sponge filling another space before the mouth. The sponge acts as a filter and holds back, in a degree, the poisonous particles of arsenic which float through the atmo-

sphere. Though conscious of their death-dealing work, the workmen grow wonderfully heedless and careless, and it is said they may often be seen *washing* their *eating* vessels in pools so impregnated with the poison that *skulls* are painted above them as a warning against the *danger* of touching the water! And yet, again, there are regions where the habitual use of arsenic, as a source of strength and beauty, is no uncommon thing. This is especially true of the metallurgic districts of Germany and Austrian Styria. Here the peasants have learned how arsenic affects the strength and complexion, and they accustom their systems to its use until the daily dose may be measured by *grains*, and its withdrawal leads to speedy death! They think they are greatly sustained by it in the fatiguing ascents of the Alps made by them as guides for travelers. But they are a short-lived people. So frequent are deaths that the attendant conditions thereof no longer appal. Graveyards are the most familiar feature of the landscape, and they are *filled* every few years! Legislative statute then requires that they be closed for twelve years, at the expiration of which time friends claim the bodies of friends, and all other graves are *sold*! The purchaser digs up the remains and carts them off to fertilize his farms and gardens! The cemetery is ploughed over, rearranged, and the burying begins again. In many cases the bodies are so well preserved that they are readily recognized!

But not only in this lawfully illegitimate use of arsenic do we have this vision of death. Arsenic is the most frequent agent used for criminal purposes, either murderous or suicidal. In a given two years in England, the number of deaths by this one substance was more than those caused by all the other poisons together. It has been employed for some of the most atrocious and heartless crimes on record. One wretch, an Italian woman, named Toffons, put to death six hundred persons. Discovered at last, she was dislocated at every possible joint, upon the rack, and then strangled. Another monster was a French girl who was married in 1651 to the Marquis de Brinvilliers. She had a lover whom her father discovered in his intrigues and cast into prison, where he learned from a fellow-captive some secrets of the "Art of Poisoning." These, upon his release, he taught to the Marchioness, and she tested their efficiency upon the invalids at the Hôtel Dieu, to whom she had access by reason of affected piety and charity. Satisfied of their power, she then operated

upon her own father, brothers, and sisters, and made several ineffectual attempts upon her husband. But, before she had destroyed him, her lover was killed in his laboratory while concocting his poisonous draughts. He accidentally dropped the mask that protected him from the fatal vapors, and he perished before he could recover it. Among his papers were found documents that fully implicated the Marchioness. She fled, but was finally arrested, beheaded, and burned, July 16, 1676.

Although arsenic is somewhat soluble in water, it is not wholly so in ordinary proportions, and when the attempt is made a film floats upon the surface of the liquid which reveals the insidious element which it contains. This may often save the life that is threatened, but more generally accidental effects result from some of the many substances in common use with which the poison is mingled. A short time ago I was lecturing upon this subject, and I visited several confectionery stores for the purpose of obtaining materials to illustrate this fact. Among other things I obtained some bon-bons put up in beautiful green papers. The tint of the paper had passed through to the candy, and there was enough arsenic in the *candy* to answer the rudest manipulations for its presence! Supposing your child or mine had eaten of those sweets with childish greediness!

With copper, arsenic forms a beautiful shade of green known as "schullis green," "emerald green," etc. It is much used for tinting paper-hangings, dress-goods, and has even been found in confections. In preparing wall papers it is often laid on very loosely, and falls off by the mere friction of daily wear. The amount is comparatively small, but the air becomes impregnated with it, and the cumulative effects of it are soon produced upon the unsuspecting sufferers.

When a green paper is thus suspected it should be carefully tested before it is put up. Nor is it necessary to pay an enormous, though perfectly just, fee to a chemical expert for this test. Every item of knowledge that is practical is invaluable, whether it be obtained from the sage or the child; and nowhere is ordinary school education more manifestly imperfect than in its failure to impress pupils with the everyday practical value of the principles taught and experiments exhibited in their course of study. Thus, the test for arsenic in wall papers is a very simple one, and consists in moistening a small bit of the paper with ammonia, popularly called "spirits of hartshorn,"

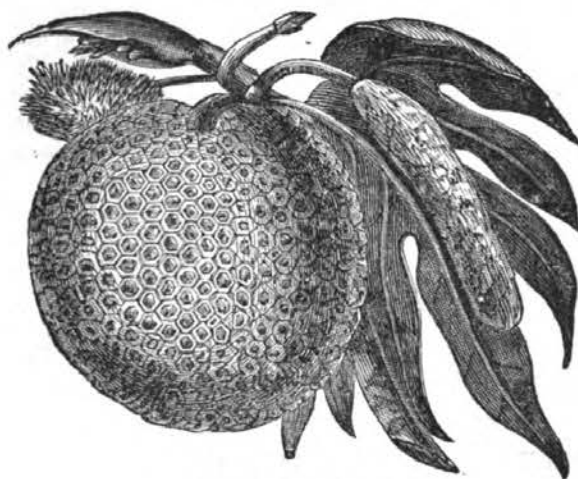
and then add a few small particles of nitrate of silver. The crystals of the salt immediately turn *yellow* if arsenic be present. In the lecture before mentioned I tested numerous specimens of paper that were brought by my pupils, and in almost every case the poison was evident. But green is not the only tint prepared with arsenic compounds: red, yellow, and white are frequently thus made dangerous. Gloves, hose, ribbons, paper collars, have all proven the effects of the material, while the frequency with which arsenic is used against vermin makes it a formidable danger in the family. So, in conclusion, we may give some of the most prominent symptoms of its toxicological effects. These vary according to the dose, and with the idiosyncrasies of the individual. Yet these variations fall within the range of a very definite limit. The usual effects may be noticeable in a minute, or not for a week. Two grains will kill, while Professor Rand, of Philadelphia, records a case of recovery that followed the ingestion of 240 *grains*! But, regardless of these peculiarities, the usual symptoms are an irritation and itching of the eyelids, accompanied by a puffiness of the same, great irritability of the stomach, with extreme nausea; and if death does not follow before more complete constitutional effects are produced, there may be an eruption upon the surface of the body, falling off of the cuticle, as in scarlet fever, loss of the hair, emaciation, salivation and paralysis.

The antidotes for arsenic are iron or magnesia. The form in which iron is used thus is the sesqui-oxide—a liquid form of iron, of which oxygen forms a large portion. In the administration for the counteraction of the poison, the oxygen unites with the arsenious acid, forming a new compound of arsenic which is insoluble, and consequently inert. But, if the iron is not immediately at hand, doses of magnesia may be given until proper advice and assistance can be obtained. If nothing better is at hand, large doses of sweet oil, butter, or even milk, will be of use until a more active remedy is obtained. The dose of the hydrated oxide, or sesqui-oxide of iron, is a table-spoonful, every five or ten minutes, until the symptoms are relieved.

CLIMATE AND MAN.—One who has given some attention to this subject, says: "It is not generally known, but it is nevertheless true, that a pure, moderately dry air generally produces great mental sprightliness, especially

with full-blooded persons. A cloudy and moist atmosphere, on the other hand, produces mental relaxation, and, with many, melancholy. This explains why suicides so often happen when the sky is overcast. The depressed mental state is thus further enhanced. Villeneuve reports that of every ten suicides which were committed in Paris during two years, nine took place in the rainy season. The influence of the climate is also well exemplified in the case of mountaineers. They are quicker, more active, and excitable.

"From the unequal action upon the body, and its reaction upon the mind, the character of various nations may be explained.



THE BREAD-FRUIT.

"The influence of a moist atmosphere is strikingly illustrated in the case of individuals who have been weakened by previous illness, from the great number of suicides committed at the close of the year 1828, in the Dutch places Gröningen and Sneek. Most of the unfortunates had suffered from the epidemics of 1826 and 1827. In the city of Sneek, with 6,000 inhabitants, not less than four suicides took place in one week, among those was a boy of eight years.

"The Swiss naturalist, Desor, in a recent essay, describes the climate of North America as very changeable and dry. After having explained a number of phenomena produced by the climate in general, he depicts its influence upon the inhabitant of this country. He derives, in a great degree, from the climate his activity, acuteness, his tall stature, his eagerness for gain, his practical talent, and his love of adventure.

"It is also well known that the inhabitants under a preponderating clear sky possess more talent for art, while those under a gloomy sky have more propensity for speculation and thought."

THE BREAD-FRUIT TREE.

ONE of our subscribers inquires with reference to the nature of the bread-fruit tree, and it may not be amiss for us to give a description of this exceedingly interesting tropical production. It is said that the bread-fruit tree was first made known to the people of Europe by a Spaniard named Mendano, who, in the year 1595, discovered the Marquesas Islands in the South Sea, where he met with this valuable fruit. His description, published long ago, is as follows: "It grows to the size of a boy's head; when ripe it is of a light green color, but of a strong green before it is ripe; the outside or rind is streaked crossways like a pineapple; the form is not entirely round, but becomes narrow toward the end; the stalk runs to the middle of the fruit, where there is a kind of web; it has neither stone nor kernel, nor is any part unprofitable except the rind, which is thin and has but little moisture; it is eaten many ways, and by the natives is called white food; it is well tasted, wholesome, and nutritious."

According to science the bread-fruit tree (*Artocarpus incisa*) is a native of the islands of the Pacific Ocean and of the Indian Archipelago. It is a rather slender tree, growing to a height of from forty to fifty feet, and often rising almost half its height without a branch. The leaves are relatively long, frequently from twelve to eighteen inches, slender in shape, dark green, and glossy. The fruit is nearly spherical in form, as represented in the engraving, and grows to the size of six or seven inches in diameter. It is covered with a rather rough rind, which is marked with small lozenge-shaped divisions, each having a small elevation in the center. When fully ripe it assumes a rich yellow hue. It is attached to the small branches of the tree by a short, thick stock, and hangs either singly or in clusters of two or three together. In the engraving we have a representation of the fully matured fruit, and also the appearance it presents in the incipient stage. It is usually gathered for

use before it is thoroughly ripe, for then, though juicy and yellow, the taste is by no means agreeable. As it is usually gathered by the natives, the pulp is white and mealy, and of a consistency resembling that of new bread. The common practice in the South Sea Islands is to cut the fruit into three or four pieces and take out the core, then place heated stones in the bottom of a hole dug in the earth and cover them with green leaves, and then upon these place a layer of fruit, then stones, leaves and fruit alternately until the hole is nearly filled, when leaves and earth to the depth of several inches are spread over all. In about half an hour the bread-fruit is baked, the outside being nicely browned generally, and the inner part presenting a white or yellowish pulpy substance, slightly resembling the texture of a wheaten loaf. It has but little taste, and is frequently sweetish, more like a plantain than bread made from wheat flour. Sometimes the natives or inhabitants of a district join in constructing a large oven or pit twenty or thirty

feet in circumference, in which heated stones are placed and many hundred bread-fruits cooked at once. Baked in this manner, bread-fruit will remain good for several weeks.

There are several varieties of the bread-fruit tree in the South Sea Islands, and they ripen at different seasons. The tree produces two crops, and sometimes three, in the course of a year. This tree is of the greatest value to the islanders, since its fruit supplies the principal part of their food and its inner bark a considerable part of their clothing, while the wood and its milky juice are found well adapted to mechanical purposes. The timber is soft and light, assuming, when exposed to the air, the appearance of mahogany. It is said that two or three of these trees yield sufficient fruit to feed the family of a native, while "from the timber he builds his house and makes his canoe. The juice he uses for glue, the dried flowers serve him for tinder, the leaves for towels, and from the inner bark he makes a kind of clothing."

Physiognomy, or Signs of Character.

Of the soul, the body form doth take,
For soul is form, and doth the body make.—Spenser.

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONTINUED FROM OUR AUGUST NUMBER.]

ESSAY VI.

"Grief laments the absence, and fear apprehends the loss of what we love, desire pursues it, hope has it in view and joy triumphs in possession." *

OF EXPRESSION (CONTINUED).

WE advance to the interesting subject of variable expression in the human face. It is by the habit of expression that the countenance is improved or degraded, and that the characters of virtue or vice are imprinted. If hardship, misfortune, care, and, still more, vice, are there habitually impressed, then all that we admire is lost.

Peace, comfort, society, and agreeable studies preserve the features mobile and ready to conform, as an index of the mind, to the sentiments we love. Petrarch, Boccaccio, and Dante dwell on the expression

of their mistresses.* Addison has justly said, "No woman can be handsome by the force of features alone, any more than she can be witty only by the help of speech."

The form of the face and the features are but the groundwork of expression. The influence of passion on the body is a subject which has been discussed from the first dawnings of philosophy. The Greeks did not confine their study to the outward form of man;

* "*Pol guardo l'amorosa e bella bocca—
La spaziosa fronte, e il vago piglio
Li bianchi denti, e il dritto naso, e il ciglio
Polito e brun tal che depinto pare.*"—DANTE.

"Soave va a guisa di un bel pavone."

Decamerone Giornata, iv.

* Heylin, vol. 1., p. 5.

they also speculated on the habit of the body as affecting the mind, and we insensibly use their language, although the course of their ideas may be rejected or forgotten. There are varieties in the forms, strength, temper, and capacities of man. It has been well said



FIG. 1.—JULIA DEANE.

that you can not tread on a man's toe without learning something of his temper. One man will have his joke, although it may hurt his dearest friend; and another has so little imagination, that even in the delirium of fever he is dull. Some are generous to profligacy, or frugal to meanness, or gallant and true, or cowardly and insincere: these varieties are a part of human nature, and necessary to the constitution of society. But the ingenious reasoners of Ancient Greece ascribed the diversity of disposition to the texture of the frame; not to the features nor to the proportions or shape of the skull, but rather to the mixture of the elements of the body, and more to the fluids than to the solids. Those distinctions, familiar to all, have in every succeeding age, been attributed to the humors. When we speak of the constitution, the temper, the humor of a man, we are in truth adopting the language of Hippocrates, who treated of the four radical humors—the sanguineous, phlegmatic, choleric, and melancholic. [Corresponding with the four seasons, spring, summer, fall, winter.]

Other philosophers have imagined that the

dispositions of man might have their source in his greater or less resemblance to the brutes. It was then allowable to fancy that a lion-like frame, strong hair, deep voice, and powerful limbs were combined with courage. But our heroes are not of that mold. To be collected amid fire and smoke and the deafening sounds of battle—to marshal thousands—or to direct the vessel's course while exposed not only to wounds but to death, is true courage; and, in these days, it is witnessed in the pale and fragile more than in the strong and sanguineous, or the bulky and hairy savage. We can better estimate true courage since combatants have been divested of the helmet and mail.*

That the features indicate the disposition by resembling those of animals, is an unjust and dangerous theory when applied rigidly in practice. The comparison which we have made of the human form and features with those of certain classes of animals, is very different from those speculations which would lead us to condemn a man because of some resemblance in face to a brute.†

Notwithstanding the attraction of the engravings in Lavater's work, the study of physiognomy is now combined with that of the cranium. But I must repeat that the brain and the skull are constructed in strict relation—a perfect brain and a perfect skull are formed together. And what is the perfection of the skull? The cranium is as a helmet constituted for the protection of the brain; and if so, must it not be adapted to the forces it has to sustain or resist? The skull is most perfect when its forms indicate the best possible provision for its peculiar use, the defence of the brain.

* Sir G. N., in the assault of —, killed his opponent. "The soldier thrust at me with his bayonet. I parried, and passed my sword through his body. In withdrawing it I experienced a sensation which will only leave me with life." A kindred spirit expresses himself well. "The modern soldier is not the stern, bloody-handed man the ancient soldier was." The ancient warrior, fighting with the sword and reaping the harvest of death when the enemy was in flight, became habituated to the art of slaying. "The modern soldier sees not his peculiar victims fall and exults not over them as proof of personal prowess." Homer represents Achilles as driving over the dead till his chariot-wheels are dyed in blood.

† This was the theory of Giambattista Porta in his "Humana Physiognomia." He was equally successful in detecting the qualities of plants by their resemblance to animals.

[The shape of the skull and the shape of the brain will be found to be in the most perfect accordance. The brain fits the skull as the hand fits the glove. The skull is the servant of the brain; and it is the *mind* that gives shape to the whole brain, skull, and body. One part corresponds with every other part.]

Let us attend more especially to the human passions. I do not mean to treat of all those conditions of mind which are considered under the head of the passions, sentiments, or emotions, but to limit my inquiry to that kind or degree of mental excitement which draws the frame into action, and which is interpreted by its agitation; when the spirits, by their vehemence, produce uncontrollable movements of the body, not determined by the will, but spontaneously arising with the state of feeling, which they strengthen and direct.*

We shall begin by marking the most extreme expression of the passions—*laughter* and *weeping*. They suit our purpose as being peculiarly human, arising from sentiments not participated by the brutes.

It is vain to inquire into the sources of these emotions; but I hope my reader consents to believe that the capacity of expression is bestowed as a boon, a mark of superior intelligence, and a source of enjoyment, and that its very nature is to excite sympathy; that it radiates, and is understood by all; that it is the bond of the human family.

LAUGHTER.

We have seen that the muscles which operate upon the mouth are distinguishable into two classes—those which surround and control the lips, and those which oppose them, and draw the mouth widely open. The effect of a ludicrous idea is to relax the former and to contract the latter; hence, by a lateral stretching of the mouth and a raising of the cheek to the lower eyelid, a smile is produced. The lips are, of all the features, the most susceptible of action, and the most direct index of the feelings.

If the idea be exceedingly ridiculous, it is

* Were we not to limit our inquiry to the agitations of the body, we should be embarrassed with the ambiguity of such words as passion, emotion, desire, inclination, appetite, the generous passions, the passion of pride or of avarice; even the mere state of suffering is called passion.

in vain that we endeavor to restrain this relaxation, and to compress the lips. The muscles concentrating to the mouth prevail; they become more and more influenced; they retract the lips and display the teeth. The cheeks are more powerfully drawn up, the eyelids wrinkled, and the eye almost concealed. The lachrymal gland within the orbit is compressed by the pressure on the eyeball, and the eyes suffused with tears.



FIG. 2.—LAUGHTER.

Simple and passive pleasures, the delight of meeting or the contemplation of innocence, relax the lips and dimple the cheek, while the eyes are bright and intelligent. The dimple is formed by the muscles which are inserted in the angle of the mouth acting on the plump integument of infancy and youth.

Observe the condition of a man convulsed with laughter, and consider what are the organs or system of parts affected. He draws a full breath, and throws it out in interrupted, short, and audible cachinnations; the muscles of his throat, neck, and chest are agitated; the diaphragm is especially convulsed. He holds his sides, and, from the violent agitation, he is incapable of a voluntary act.

It is impossible to avoid the conclusion, that it is the respiratory organs and their muscles which are affected during the paroxysm of laughter. Physiologists, in all former times, attributed the line of sympathetic relations which draw these remote parts into action, to a nerve called the sympathetic.

But I have proved, that there is a machinery altogether distinct; and that the expression, not only of this, but of all the other passions, arises from that system of nerves, which, from their great office, I have called *respiratory*.

The respiratory nerves spring from a common center in the medulla oblongata,* and pass off divergingly to all the parts just enumerated, and to every organ employed in respiration. They combine these distant parts in the ordinary action of breathing; and they are the agents in all the effects of passion, when these organs give the outward signs of the condition of the mind.

WEeping.†

Weeping is another state of the features proceeding, as we have before observed, from sensibility, and, therefore, human. Though the organs affected are the same as in laughter, viz., the respiratory muscles, the expression is as much opposed as the nature of the emotion which produces it. Were the condition of the features the effect of mere excitement, why should there be an association of the same class of muscles so different from that in laughter? Is not this variety of expression a proof of *design*, and that all our emotions are intended to have their appropriate outward characters? According to Homer, the expression of weeping is not confined to babes; Ulysses is made to feel that sensation in his nose which precedes the shedding of tears.

The lachrymal glands are the first to be infected, then the eyelids, and, finally, the whole converging muscles of the cheeks. The lips are drawn aside, not from their circular fibers relaxing, as in laughter, but from their being forcibly retracted by the superior influence of their antagonist muscles. Instead of the joyous elevation of the cheeks, the muscle which pulls down the angle of the mouth, *triangularis oris*, is more under influ-

ence, and the angle is depressed. The cheeks are thus drawn between two adverse powers, the muscles which surround the eyelids and that which depresses the lower lip.

The same cause which drew the diaphragm and muscles of the chest into action in laughing is perceived here. The diaphragm is spasmodically and irregularly affected, the chest and throat are influenced, the breathing



FIG. 3.—WEeping.

is cut by sobbing, the inspiration is hurried, and the expiration is slow, with a melancholy note. In the violence of weeping, accompanied with lamentation, the face is flushed, or rather suffused by stagnant blood, and the veins of the forehead distended. In this we see the effect of the impeded action of the chest; a proof not only that it is the respiratory system of nerves which is affected, but also of the condition of the heart and its influence in respiration, of which we have spoken in a former essay. This expression of emotion may be introduced even in the highest walks of art; but it requires great taste to portray it without offensive exaggeration.*

* The medulla oblongata is that part of the nervous system which is traced from the brain into the tube of the spine; it is, consequently, the upper part of the spinal marrow.

† I have thrown the expression of weeping from pain into the face of a faun, for such an expression is inexpressibly mean and ludicrous in the countenance of a man.

* "The finest possible example of this condition of suffering is in the picture of Guercino (in the Gallery of Milan), the 'Departure of Hagar and Ishmael.' Those who have seen only the engraving can have little conception of the beauty of the picture, for the perfection is in the coloring. Hagar has been weeping; her

The depression of the angle of the mouth gives an air of despondence and languor when accompanied by a general relaxation of the features, or, in other words, of the muscles. When the *corrugator* which knits the brows co-operates with it, there is mingled in the expression something of mental energy, of



FIG. 4.—WEEPING CHILD.

moroseness, or pain. If the frontal muscle adds its operation, there is an acute turning upward of the inner part of the eyebrow, characteristic of anguish, debilitating pain, or of discontent, according to the prevailing cast of the rest of the countenance.

But while languor and despondency are indicated by depression of the angle of the mouth, the depression must be slight, not violent; for the *depressor anguli oris* can not act strongly without the combination of the *levator menti* or *superbus*, which quickly produces a change in the expression by making the nether lip pout contemptuously.

In sorrow, a general languor pervades the whole countenance. The violence and tension of grief, the lamentations, and the tumult, like all strong excitements, gradually exhaust the frame. Sadness and regret, with depression of spirits and fond recollections, succeed; and lassitude of the whole body, with dejection of the face and heaviness of the eyes, are the most striking characteristics. The lips are relaxed and the lower jaw drops;

eyes are red and swollen, but not so as to destroy her beauty; she turns again on hearing Abraham once more addressing her; she suspends her breath; you persuade yourself that you hear her short, convulsive sobs, for in the elevated shoulders and in the form of the open lips this is plainly indicated. The suffering expressed in the condition of the chest, the misery in the forehead, and the coloring of the eyelids, make this the finest example of expression which I have seen."—*Note from Journal.*

the upper eyelid falls and half covers the pupil of the eye. The eye is frequently filled with tears, and the eyebrows take an inclination similar to that which the depressors of the angles of the lips give to the mouth.*

I am not quite sure that in the distress of Constance there is not an unnatural mixture of the tumult and violence of grief with the contemplative recollections of sorrow. Her impatience and turbulence, which make her tear her hair, defy all counsel and redress, and call on death or madness as her sole relief, seem ill assorted with that calmness of spirit which can stop to recollect and enumerate in detail the figure and endearing manners of her son.

"Grief fills the room up of my absent child,
Lies in his bed, walks up and down with me;
Puts on his pretty looks, repeats his words,
Remembers me of all his gracious parts,
Stuffs out his vacant garments with his form:
Then, have I reason to be fond of grief.
Fare you well! had you had such a loss as I,
I could give better comfort than you do.
I will not keep this form upon my head

[tearing off her head-dress]

When there is such disorder in my wit.
O Lord! my boy, my Arthur, my fair son!
My life, my joy, my food, my all the world!
My widow's comfort, and my sorrows' cure!"†

This appears rather to be the stage of the passion which is called sorrow, the indulgence of which is attended with a melancholy



FIG. 5.—SADNESS.

delight which can sanction the conclusion, "Then have I reason to be fond of grief." Yet, as conviction returns at intervals upon

* Some have been so far deceived by the effect of this raising of the eyebrows toward the center of the forehead as to give the same oblique line to the eyes; but the canthus or angle of the eye is fixed immovably, and no working of passion can alter it.

† King John, Act III., Scene 4.

the mind, a period of quiet and sorrowful resignation is succeeded by starts and violent bursts of grief.

Though grief is in general distinguished by its violence, lamentation, and tumult, while sorrow is silent, deep-brooding, and full of depression, there is a stupefaction which sometimes characterizes grief, "the lethargy of woe."

We have already had occasion to remark that expressions peculiarly human chiefly affect the angle of the mouth and the inner extremity of the eyebrow, and to these points we must principally attend in all our observations concerning the expression of passion. They are the most movable parts of the face; in them the muscles concenter, and upon the changes which they undergo expression is acknowledged chiefly to depend. To demonstrate their importance we have only to repeat the experiment made by Peter of Cortona, to sketch a placid countenance, and touch lightly with the pencil the angle of the lips and the inner extremity of the eyebrows. By elevating or depressing these, we shall quickly convey the expression of grief or of laughter.

These parts, however, and all the features of an impassioned countenance, have an accordance with each other. When the angles of the mouth are depressed in grief, the eyebrows are not elevated at the outer angles as in laughter. When a smile plays around the mouth, or the cheek is raised in laughter, the brows are not ruffled as in grief. The characters of such opposite passions are so distinct, that they can not be combined where there is true and genuine emotion. When we see them combined, it is by those who have an unnatural control over their muscles, and the expression is farcical and ridiculous. It is an unworthy conceit to give to one side of the face comedy and to the other tragedy.

In the features of an impassioned countenance there is a consent and accordance of expression. It is not upon a single feature that the emotion operates; but the whole face is marked with expression, all the movements of which are consentaneous. This is referable to some cause acting generally on the tone and state of the frame, the peculiar expression of individual emotion being dis-

tinguished by the action and determination of certain features.

Taking indifference as the line of distinction between the two great classes of pain and of pleasure, the sensations above this line are weak compared with those below it. The simple sensations of pleasure, before they are heightened and diversified by the multiplied associations of mental affection, are soft and gentle in their nature. The class of painful sensations is powerful and overwhelming; they are meant as our guardians and protectors against danger and death, and they operate with resistless force. The pleasurable sensations induce a languor and delight, partaking of the quality of indulgence and relaxation; the painful excite to the most violent tension, and make the muscular frame start into convulsive action.

The emotions and passions, grounded on these great classes of sensation, raised and increased by the mingling of hopes and fears, and the combination of analogous and associated images of delight or of danger, derive their most important traits of expression from the general tone of pleasure or of pain.

In pain the body is exerted to violent tension, and all the emotions and passions allied to pain, or having their origin and foundation in painful sensations, have this general distinction of character, that there is an energetic action or tremor, the effect of universal and great excitement. It must, at the same time, be remembered that all the passions of this class, some more immediately, others more indirectly, produce in the second stage exhaustion, debility, and loss of tone from over-exertion.

On the other hand, as pleasure is characterized by languor, tranquillity, and relaxation, all the emotions related to it or deducible from pleasurable sensations, are felt in the prevailing state of the system—a degree of inaction and, as it were, forgetfulness of bodily exertion, and an indulgence in mental contemplation.* The contemplation of beauty

* "Here (*Accademia delle belle Arte, Bologna*) are two pictures which one naturally compares. On the one side is the *St. Cecilia*; on the other, the *Murder of the Innocents*. In the *St. Cecilia* of *Raphael*, in ecstasy, there is not only great beauty, but very fine expression. She hears the music of angels; her face is turned upward, the features composed and fine. In the lower part of the face there is a gentle relaxation, almost a smile; the

or the admiration of soft music produces a sense of languor; the body reclines, the lips are half opened, the eyes have a softened luster from the falling of the eyelids, the breathing is slow, and, from the absolute neglect of bodily sensation and the temporary

ESSAY VII.

THE SUBJECT CONTINUED:—OF PAIN—HORROR—CONVULSIONS—DEMONIACS—DEATH.

THE further we proceed in this inquiry, the more difficult and delicate does it become. In continuing the subject, I shall rather in-



FIG. 6.—PAIN.

interruption of respiration, there is a frequent low-drawn sigh.

eyes are directed upward, but the eyebrow is placid. She is so wrapt that the pipes of the organ are almost falling from the hands, which hang without exertion.

"In the picture of the Murder of the Innocents, by Guido Reni, there is an admirable figure of a woman, wild and full of fire, who flies with her infant pressed to her bosom. But there is another whose face is in the very attitude of the Cecilia, yet how different! The murder of her child has been perpetrated; the child lies dead before her; she is on her knees; her hands are clasped, and she looks up to heaven; her mouth is open, and all the features relaxed. The hair and dress are deranged. What, then, is the difference in expression, for there is a certain resemblance in the form and attitude of these heads? What is the difference between the re-

dulge in detached remarks than pretend to follow a regular course; keeping, I hope, still true to the observation of nature, and, as far as possible, unprejudiced by theory.

Pain is affirmed to be unqualified evil; yet pain is necessary to our existence; at birth, it rouses the dormant faculties and gives us consciousness. To imagine the absence of pain is not only to imagine a new state of being, but a change in the earth and all upon it. As inhabitants of earth, and, as

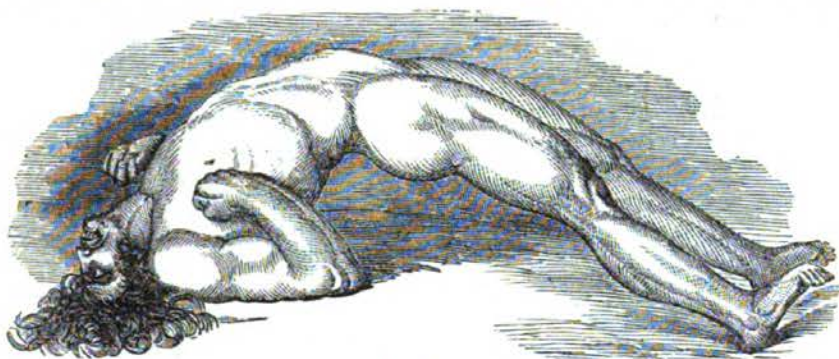
laxation of despair and of enjoyment: the relaxed jaw and open mouth and troubled forehead of the one, the softness and languor, with a certain firmness, in the lips of the other."—*Note from Journal.*

a consequence of the great law of gravitation, the human body must have weight. It must have bones, as columns of support, and levers for the action of its muscles; and this mechanical structure implies a complication and delicacy of texture beyond our conception. For that fine texture a sensibility to pain is destined to be the protection; it is the safeguard of the body; it make us alive to those injuries which would otherwise destroy us, and warns us to avoid them.

When, therefore, the philosopher asks why were not our actions performed at the suggestions of pleasure, he imagines man, not constituted as he is, but as if he belonged to a world in which there was neither weight nor pressure, nor any thing injurious, where there were no dangers to apprehend, no difficulties to overcome, and no call for exertion, resolution, or courage. It would, indeed, be a curious speculation to follow out

straining, struggling. If the pain be excessive, he becomes insensible, and the chest is affected by sudden spasms. On recovering consciousness, he is incoherent, till again roused by suffering. In bodily pain conjoined with distress of mind, the eyebrows are knit, while their inner extremities are raised; the pupils are in part concealed by the upper eyelids, and the nostrils are agitated.

The expression of pain is distinguished from that of weeping not less than from that of laughing. These arise from mental conditions, independent of physical causes, and are uncontrollable and sympathetic. But pain is bodily; that is to say, there is a positive nervous sensation, which excites to action or to acts of volition; an energy of the whole frame is produced by suffering, and, from the consciousness of its place or source, the efforts are directed to remove it. Hence the struggle, the powerful and voluntary ex-



19. 7.—CONVULSIONS.

the consequences on the highest qualities of the mind if we could suppose man thus free from all bodily suffering.

But I return to the position that pain is the great safeguard of the frame, and now proceed to examine its expression.

In bodily pain the jaws are fixed, and the teeth grind; the lips are drawn laterally, the nostrils dilated; the eyes are largely uncovered and the eyebrows raised; the face is turgid with blood, and the veins of the temple and forehead distended; the breath being checked, and the descent of blood from the head impeded by the agony of the chest, the cutaneous muscle of the neck acts strongly and draws down the angles of the mouth. But when joined to this, the man cries out, the lips are retracted, and the mouth open; and we find the muscles of his body rigid,

ertions which accompany it. Yet there is a resemblance and, in some degree, an alliance between these actions and the spasms excited by galvanism in experiments on the nerves of animals apparently dead.

OF DEMONIACS.

"*He has a Devil.*"—Two of the greatest painters, Raphael and Domenichino, have painted demoniacal boys. In the convent of Grotto Ferrata, in the neighborhood of Rome, Domenichino has represented Saint Nilus in the act of relieving a lad possessed.*

* "Domenichino, in consequence of some peccadillo, took shelter in the sanctuary of the monks of the Grotto Ferrata, a fortified convent some miles distant from Rome. The monks, under the threat of delivering him up, made him paint their walls; and the frescoes are, indeed, beautiful, particularly the old men. That compartment which is called the Demoniac Boy is most admired."—*Note from Journal.*

The saint, an old man, is on his knees in prayer; the lad is raised and held up by an aged man; the mother with a child is waiting the consummation of the miracle. Convulsions have seized the lad; he is rigidly bent back; the lower limbs spasmodically extended, so that his toes only rest on the ground; the eyes are distorted, and the pupils turned up under the eyelids. This would be the position of *Opisthotonos* were not the hands spread abroad, the palms and fingers open, and the jaw fallen. Had the representation been perfectly true to nature, the jaws would have been clenched and the teeth grinding. But then the miracle could not have been represented, for one, under the direction of the saint, has the finger of his left hand in the boy's mouth, and the other holds a vessel of oil, with which the tongue is to be touched. The drawing and coloring

painful, and something must be left to his taste and imagination.

It may be considered bold to criticise the works of Raphael, but I venture to say that if that great master intended, in his cartoon of the Death of Ananias, to excite horror, the effect would have been more powerful if there had been greater truth in the convulsions of the chief figure instead of a mere twisting of the body. Strange it is, but true, that we are most affected by the more slight, if correct, portraiture of a natural condition.

In the same painter's great picture of the Transfiguration, in the Vatican, there is a lad possessed and in convulsions. I hope I am not insensible to the beauties of that picture nor presumptuous in saying that the figure is not natural. A physician would conclude that this youth was feigning. He is, I



FIG. 8.—HYDROPHOBIA.

exhibited in the lad and the grandeur of the old men make this one of the most admired paintings in Italy.

I have here given a sketch of the true *Opisthotonos*, where it is seen that all the muscles are rigidly contracted, the more powerful flexors prevailing over the extensors.* Were the painter to represent every circumstance faithfully, the effect might be too

presume, convulsed; he is stiffened with contractions, and his eyes turned in their sockets. But no child was ever so affected. In real convulsions the extensor muscles yield to the more powerful contractions of the flexor muscles; whereas, in the picture, the lad extends his arms, and the fingers of the left hand are stretched unnaturally backward. Nor do the lower extremities correspond with truth; he stands firm; the eyes are not natural, they should have been turned more inward, as looking into the head, and partially buried under the forehead. The mouth, too, is open, which is quite at variance with the

* The original sketch is in the College of Surgeons of Edinburgh. I took it from soldiers wounded in the head at the battle of Corunna. Three men were similarly hurt, and in short, successive intervals similarly affected, so that the character could not be mistaken.

general condition, and without the apology which Domenichino had. The muscles of the arms are exaggerated to a degree which Michael Angelo never attempted; and still it is the extensors and supinators and not the flexors which are thus prominent.

Disease has characteristic symptoms which we can accurately and scientifically reduce to description; and borrowing from this source, there is no state of suffering from which we can so well infer the nature of the agitation of the frame as from hydrophobia. The patient being sensible of his condition, and calm, and aware of the experiment which is to be made upon him by his physician, when he calls for a glass of water, can not resist the influence of the disease. He shudders, his face assumes an expression of extreme horror and alarm; convulsive gulplings take place in his throat, he flies to some support, and clings to the bedpost in an agony of

suffocation. This I have witnessed in a powerful man. I have had the pain of seeing the disease in a girl of eighteen; the irritability of the skin being increased to an awful degree, so that the touch of her long hair falling on her naked body excited, as she said, the paroxysms. These recurred with a sense of choking, with sudden and convulsive heavings of the chest, a shuddering and catching of the muscles of breathing, and an appalling expression of suffering. The paroxysms in such a case becoming more frequent and severe, finally exhaust the powers of life. In these convulsions it is the nervous and muscular systems belonging to the natural function of respiration which are affected; and as they are also the organs of expression, the condition is seen not only in the countenance, but in the throat and chest, to be that of extreme horror.

[TO BE CONTINUED.]

PECULIAR CHARACTERS.

THERE are snobs and "stuck-up" persons whom it is very disagreeable to meet. Mr. Fields, in his "Plea for Cheerfulness," thus hits off a class of persons who never see the best side of anything, but are dissatisfied habitually. He says:

"The Nil Admirari Society includes among its members Mr. Solomon Nutgall and his acidulated, critical friends. These glass-eyed, caducous young gentlemen never praise anything nor anybody but themselves, from principles of 'high art.' (They are commonly the victims of weak spines and restricted sympathies.) If you like a thing, they don't. To be popular and universally read is, with them, a literary crime. Shakspeare, Milton, and Pope they consider as overrated by a deluded, ignorant world, but they incline their modest heads and ears, in a demi-semi-quavering way, toward the more recent long-meter school, of which they assume to be disciples. 'Be critical and praise not' is their motto. They prejudge and foredoom everybody who does not belong to their pallid little set. They seem always to be suffering from a prickly and defiant measles of Irreverence. They are in a chronic condition of Mislike, and constantly announce their complaint in the Weakly Friday Review, which, having few or no readers, their malady gets

aggravated. If you, in a moment of honest enthusiasm, burst into a note of manly admiration over a fine essay, a good piece of acting, a grand poem, or a capital story, they look at each other across the table, and exchange glances of contempt and pity for your opinion. Should you, in their wisely-critical presence, chance to quote with commendation a fine passage from 'As You Like It,' for instance, young Nutgall, with his unhealthy sneer, would be apt to interrupt your train of thought by elevating his coldest shoulder, and sapiently observing to the company that 'Shakspeare's ignorance of geography is nowhere more apparent than in this same play of "As You Like It," for it is there he has introduced the tropical lion and serpent into the forest of Arden, whereas every scholar knows that Arden lies in a temperate zone.'

"The Nutgalls affect a vehement indifference for what everybody else considers admirable and worthy of attention. One of the family, returning home from a recent visit to London, took especial pains to inform me he did not go into Westminster Abbey; 'he passed it daily,' he said, 'but never went in, as he felt no interest in the spot.' You, and the crowd, enter such places as the Abbey, but the Nutgalls don't go where you do.

"The wisest poet of mankind calls Reverence 'that angel of the world,' and are we not all apt to be better for visitations of that ennobling spirit?"

[In phrenological parlance, we describe this class of bitter Nutgalls as "negatives," with

more Combativeness than Benevolence, small Hope, with much self-conceit, and a sort of egotism, which is assumed for effect—intended to impress common mortals with an idea of their immense importance. Pass them by without rebuke; they are objects of pity.]

Our Country and Its Resources.

That which makes a good Constitution must keep it, viz., men of wisdom and virtue; qualities that, because they descend not with worldly inheritance, must be carefully propagated by a virtuous education of youth.—*William Penn.*

HUMAN GOVERNMENTS.

THAT man, individually and collectively, needs some rule of action by which he shall govern his conduct is a self-evident proposition. He possesses certain ruling faculties which give him the desire of personal immunity of thought and action, and also a desire to govern others. This governing tendency has assumed many forms acting in conjunction with various other mental impulses. One who is influenced chiefly by Self-Esteem and Approbativeness tends toward personal government, toward absolute, imperial sway; and this absolute government is subject to various shades of modification.

THEOCRACY.—In a people of simple habits and a strong religious tendency a theocracy would be the rule of government. The individual will of the capable and the aspiring would seek ascendancy, and to strengthen his prerogatives he would naturally appeal to the religious feelings of the people and enforce his will by a "thus saith the Lord."

The true theocracy is a government by the immediate direction of God, in which "the word of the Lord," communicated through prophets, is the guide of the ruler and the basis of obedience by the people. The Jewish dispensation was the most perfect example of it which the world has seen.

MONARCHY.—Is literally the government by a single individual, or in which one person exercises the sovereign authority. When the emperor, king, or chief magistrate, possesses the entire ruling power he is properly a monarch, and he may be a just and humane person, and rule the land in the fear of God and love of man; but if he be a selfish and cruel man he becomes despotic and tyrannical in his rule, and a scourge to the people.

LIMITED MONARCHY.—When the head of the State still holds the dignity of royalty and shares the ruling power with a class of nobles, or with a parliament, the government is called a mixed or limited monarchy. The monarchy may be elective, but it is a condition generally attended with great rivalries and feuds. An absolute monarchy has a hereditary prince who rules without any limit but his own will, and it matters nothing what his title be, whether autocrat, emperor, or king.

REPUBLIC.—This form of government literally means a *thing* of the *people*, in which the supreme power belongs to the people, or a portion of them, and is by them delegated, under constitutions and laws, to legislatures and courts, and not to a single person or family. A republic may be either aristocratic or democratic. The extinct republics of Greece, of Sparta, Venice, and Genoa, were aristocratic, while that of the United States is democratic.

The Kingdom of Great Britain is really an aristocratic republic, in which the actual power is exercised by the titled, wealthy, and educated classes, while the forms and many of the usages of a monarchy are still retained. Every year makes the people more free, and though the ruling classes are horrified at the bare mention of the word "republic," that nation is drifting to republicanism, and will reach it just as surely as the melting snows of the Alleghanies and of the Rocky Mountains will reach, by devious courses, the Gulf of Mexico. The long and tortuous way will be finally traversed, and that noble people shall have a more genial political sky and better conditions for universal development and happiness. From barbarism through Caesarism and king-

ism to republicanism is a long and suffering way, but the "eternal years of God" shall bring the best truth to the best results.

The flood of emigration from the monarchical governments of the Old World is sending back those brotherly letters about affairs in the Great Republic of the Western World, and like leaven they convert the people from royalty to individualism, from kingship to popular liberty. Hence, even in aristocratic England and imperial Germany the American immigrants are melting away the blind loyalty of their former fellow-subjects, and concession after concession to the people is forced from the crowned heads. The universal education of Germany qualifies it for general suffrage, and when England and Ireland shall have thoroughly diffused education among the people, they will demand and receive the ballot.

DEMOCRACY, in its strictest sense, can not exist except among small communities. In large States each person can not deliberate and vote directly on every law or rule of conduct.

The New England town meeting, in which every man votes on every question of the town expense and government, realizes the true democracy. But all the citizens of a State can not assemble to pass general laws.

Hence delegated power by the people to their representatives, who constitute a legislature to make laws, and the election of magistrates by the whole people to execute those laws; the whole being carried on according to certain great organic laws called a Constitution, which the whole people by free ballot have accepted as the supreme law of the land. Such a government is a democratic republic—democratic in its primary basis and sources of power, and republican in that it is a government by means of power delegated by the free action of the people, with the right of impeachment of delinquent officers, and frequent elections, to rule out the incompetent or dishonest, and vote in the capable and the upright. The nearer the people can keep to the sources of power the better. The whole people should be educated so as to think and vote correctly. Then frequent elections to keep office-holders responsible to the people will tend to elevate the tone of government and realize the reasonable hope of the patriot in the propriety and possibility of good government by the whole people.

Such a government—a DEMOCRATIC REPUBLIC—we have established in America, and, God willing, it shall be perpetuated.

ROCKY MOUNTAIN ECHOES.—No. 3.

MANITOU.*

BY WILLIAM E. FABOR.

Long years ago,
Ere white man's foot these beauteous wilds had trod,
The Indian chiefs about this bubbling spring,
With rich oblation offerings, bent low
In honor of the Manitou, whose smile
To them was life. As, dipping from the fount
The sparkling waters, blessed to them and theirs
By the Good Spirit, whose abode was hid
Where never human foot dared tread, they heard
His whispers floating upward through the air,
Long ere the glittering lances of the sun
Pierced through the leafy interstice of shade,
In cañons where the pine and cedar hung
From rocky ledge, or clung to crumbling soil,
Or sent their tangled roots to touch the stream
And eke the measure of the narrow span;
Of years to them allotted ere they fell,
Prone as the idol Dagon from his throne,
Because, like him, their weakness lay where strength
Was needed most to hold the body up.

And as they drank,
They felt his blessing coursing through their veins,
And rose refreshed, endowed with newer life;
Or young or old upon whose brow the hand

Of fell disease had lain, had but to come
To find a medicine more potent far
Than any herb that kissed the sun, or root
That ran its shoots toward the under world.
Here, in the water, babbling as it ran,
Of MANITOU the vital essence flowed,
And flowed for all—Shoshone or Comanche,
Cheyenne, Plute, or neighbor, friend or foe.
Hard by the Spring two bowlders rest. On one,
Whose base the Fountain waters kiss and lave,
And dash against in mimic impotence
Of raging foam, at even-time, the smoke
Of sacrifice oft rose, as slaughtered deer,
Through fire to ashes grew, while Indian brave
And squaw, with wampum bound, bent low to wait
The coming of the Manitou to lift
The offering they gave; and if he came
Upon the whirlwind, all was well for them.
The gift was welcome, and he swept it off;
But if, upon the bosom of the stream,
The ashes fell, their God his anger showed—
Their sacrifice was vain. Then, on the rock
That rose beside the stream, below the Spring,
They brought a gift their God could not refuse,
An infant, newly born, on whom the night

* The powerful mineral spring, in the Fountain Cañon, visited by Ruxton in 1846, and by Fremont in 1848—five miles from Colorado Springs.

Had never set, and from this rock there rose
Such sacrifice as Abraham of old
Had made of Isaac, had not Providence
Stretched forth His hand to save.

These days have passed !
The dusky savage stoops no more to drink ;
The flames of sacrifice no longer rise ;
But still La Fontaine to the Arkansas
Its treasure carries, born of mountain snow ;
And still the healing waters bubble forth.
Another generation gathers here,
With paler face and feebler frame, to drink
And own the virtues of the Manitou ;
And if they hear no whisper in the air
From the Good Spirit whose abode was here,
Still, as they linger, memory conjures up
The legends of the past, till on them falls
The spell of silence, while the shadows, thrown
From mountain peaks around them, on them fall,
And add their mystic influence, till rock

And rill, and vale and hill and cañon wild
Are full of swarthy shapes, whose ghostly dance
And incantation echo through the air.

The pink-cheeked honeysuckle blooms
In solitude no more on Camerou's Cone ;
The wild bees seek the summit of Pike's Peak
To find that human feet have trodden down
The flower whose pollen gave them food. The lark
No longer is lone witness to the dawn ;
And silence, once supreme in Rainbow Glen,
Has flown her nest and winged her flight to glens
Far distant from the Grand Chlann, that stands
The sentinel and wonder of the lands
That southward slope toward the Spanish Peaks.
The days are full of echoes, and the nights
Of sounds of passing feet and whispered words ;
And lovers loiter long beneath the moon
In Fountain Cañon, and beside the Spring
Whose healing waters in these days have made
This spot the nation's Sanitarium

COL. ETHAN ALLEN,

CHAIRMAN OF THE NATIONAL COMMITTEE OF LIBERAL REPUBLICANS.

THOUGH not large, Col. Allen has a striking presence. His clean, white skin, fine black hair, speaking black eyes, and nicely-chiseled features give him a marked expression. The portrait fails to do justice to the subject, save in this, the head is high, as in the picture, and the moral sentiments are well developed. There is large Benevolence, Conscientiousness, Veneration, and Hope. Spirituality is not wanting, but is subordinate to the intellect, which is prominent. He has a compact and wiry organization. He is full of energy, positiveness, and persistency. He is organized to be healthy, and is capable of accomplishing a great deal of work through his mental activity and physical endurance. Few men are so sharp, intense, and earnest, and few have as much persistent endurance and elasticity. He is a man of decision and determination. He is firm almost to obstinacy; he is self-reliant, generally measures his own strength and duties, and proceeds without waiting for help. He loves his liberty and will defend it, but is considerate of the rights of others. He is sociable, friendly, kindly, neighborly. He aims high, is aspiring, but not selfishly ambitious. He is willing to earn the right

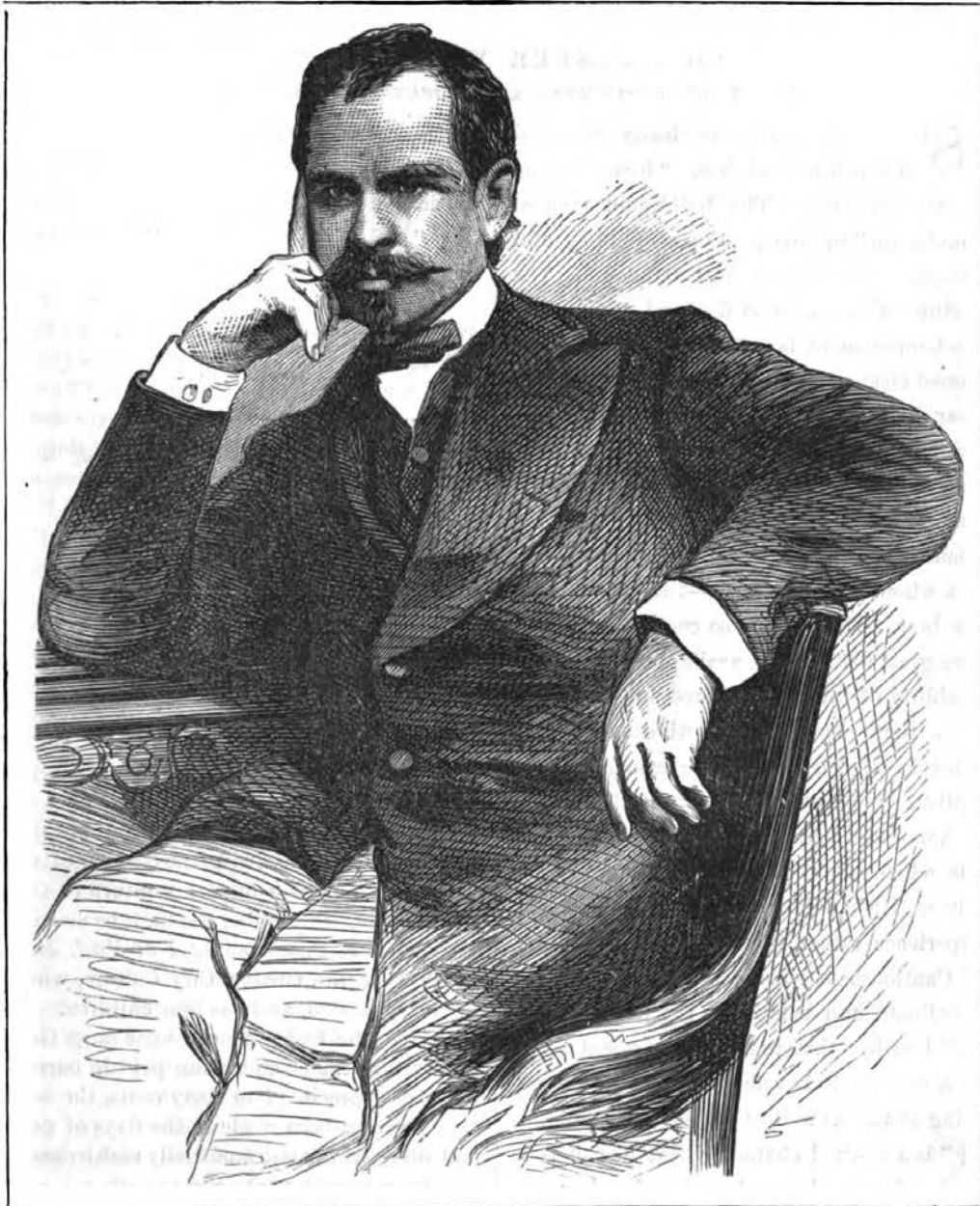
to promotion, and his habits generally being good, he will inevitably work his way up, either in law, legislation, or literature. We predict favorably of his future.

COL. ALLEN was born in Monmouth Co., N. J., in 1834. He is of Puritan descent, his ancestors coming into New Jersey from New England. His grandfather was Commander-in-Chief of what was known as the "Minute Men," guarding the coast from Sandy Hook to Cape May, during the Revolution of 1776. His father, Samuel F. Allen (still living), was a captain in the war of 1812, and all his brothers were in the Union army during the late rebellion, for which he himself organized a regiment of men. Mr. Allen has resided in this city for the past twenty years. He entered Brown University, Rhode Island, in 1855, and graduated with the honors of his class, being chosen the class orator. Entering the University Law School of New York, he delivered the valedictory in 1860, and was that year admitted to the bar.

Col. Allen has never been a politician in the general acceptance of that term. He never belonged to a club or ward association in his life, but has always regarded it his duty as a citizen to take part in the general campaigns, which he has usually done as a public speaker, being considered one of the most magnetic and eloquent platform orators in our country. In April, 1861, he was ap-

pointed Chief Assistant United States District Attorney by the Hon. E. Delafield Smith, and in April, 1865, he was invited by the Hon. Daniel S. Dickinson (Mr. Smith's successor as United States Attorney) to remain in the same position, and after Mr.

joyed a practice more important or lucrative. We quote from a sketch of his life which appeared in the *New York Citizen* on the 20th of December, 1866, as follows: "Mr. Allen has tried and won some of the most important verdicts. He tries a case closely,



Dickinson, he was continued through the administration of Mr. S. G. Courtney. In 1869, when Mr. Pierrepont came into office, Col. Allen resigned a place he had acceptably filled so long, for private practice, and since that time probably no one of his years has en-

joyed a good advocate, a sound reasoner, and has much influence before a jury. His leading characteristic is a keen love of justice, truth, and right. He treats all applicants to him for advice, whether high or low, with equal fairness, and he unflinchingly does

what he deems to be right, regardless of consequences. He is a highly honorable man, personally popular, of unblemished reputation, and conscientious in the discharge of every duty. He is outspoken and manly in his relations with others, and his frank nature

gains the confidence of his friends and of all who have to consult him on official business." Col. Allen attended the Cincinnati Convention as an enthusiastic supporter of Horace Greeley, and the National Committee of the Liberal Party has placed him at its head.

COL. JASPER W. JOHNSON,

SECRETARY OF THE LIBERAL REPUBLICAN NATIONAL COMMITTEE.

"SELF-RELIANCE" is clearly expressed in this head and face. "I can" is seen in every feature. The build and general "make up" of this gentleman is snug and compact rather than coarse and loose. The texture of the fiber is fine and tough, and the temperament is mental-motive, the first-named element predominating. His mind is clear, quick, and racy, as his body and brain are fine and flexible. Such an organization is very enduring; it will literally bend double and twist without breaking. While the quantity of the organization is sufficient—as a whole not over large—the *quality* is of the best. The brain is so constructed as to give great definiteness, availability, and practicability of talent, and force and efficiency in matters requiring executiveness. He is shrewd and sharp in reading men and their motives; is proud and plucky in the defense of honor and justice; is kindly, even generous, where objects of charity present themselves. He has the prudence of intellect and experience rather than the fear or timidity of Cautiousness. He is social without being inordinate, and belongs to the nation or the world rather than to a town or a state. As to a pursuit it is safe to say he can do one thing almost as well as another. "Availability" is a marked characteristic; he can turn his hand to anything—law or legislation, music or medicine. He would do *best* in surgery, merchandising, or manufacturing, railroad-ing or shipping. In short, he can do what he likes. He can think clearly, write and speak fluently, and make all his knowledge useful

on all occasions. He is active, prompt, resolute, energetic, persevering, and self-relying. With him it is not "go, boys," but "come, boys," and he takes the lead. He is a natural captain.

COL. JOHNSON is the third son of the Rev. William Johnson, for twenty-six years a Baptist minister, but for the last twenty-two years a member of the Universalist Church; he was the son of the Rev. Ebenezer Johnson, also a Baptist minister, and is of English and Irish stock. The Colonel's mother was the daughter of Rev. Jacob Laymon, a Baptist minister of great eloquence. Her mother was of the Taylor family, well known in Tennessee.

The Colonel was born in Indiana, October 31, 1837, was taken to Iowa in 1840, and to Oregon in 1846. He studied law, and was admitted to the bar September 20, 1857, and soon after commenced the practice of his profession at Seattle, in Washington Territory. His business increasing, in 1860 he removed to Olympia, the capital of that Territory. He was Adjutant-General of the Territory from 1859 until his return to Oregon in 1862. September 20, 1861, he married Miss Mary E. Post, daughter of Prof. John D. Post, of the Oregon City College, where he was educated, and has four children.

In 1862 he had procured some large Government contracts, and being paid in currency, then depreciated to forty cents, the contracts having been made in the days of gold and silver, he became financially embarrassed, and he returned to Oregon to seek a larger field for exertion. Soon after his return Gov. A. C. Gibbs appointed him a judge in the Eastern District of Oregon, which office he held for two years. From 1865 to 1868 he owned and edited the *Courier* newspaper, and won much reputation for the boldness, inde-

pendence, and power with which that paper was conducted. Tiring of newspaper life he returned to the practice of the law in the city of Portland, where he now resides. On account of his acute analytical mind and his superior oratorical ability, he has been forced upon the political stump in his State in every

ment, and his superior organizing ability has been exercised since the Cincinnati Convention in preparing for the great contest in November. He is the secretary of the National Liberal Republican Executive Committee, and member of that Committee from Oregon; and although his services are re-



campaign for the past ten years. He was an attendant of the late Cincinnati Convention, and contributed as much as any man to the selection of the Liberal Republican ticket as it now stands. His personal magnetism and control of men brought him to the attention of the leaders of the Liberal move-

quired at head-quarters to assist Col. Ethan Allen, the energetic and efficient chairman, in the administration of affairs, the candidates and others insist that his eloquence and influence are needed in the field, and he will therefore take the stump at once for the cause he so earnestly advocates.



NEW YORK,
SEPTEMBER, 1872.

PRISONS AND PRISONERS.

HOW TO TREAT OUR INDIANS.

THERE are, at present, not far from 50,000 persons confined in jails, dungeons, reformatories, and penitentiaries in the United States. We have not all the facts as to their nativity; a large percentage are of foreign birth; but a still larger are of intemperate habits. More than seventy-five per cent. of the old and young are, or were, habitual users of tobacco. About thirty-three per cent. can not read or write. We have not the statistics showing the number of imbeciles or of the insane. It may be something less than that of the criminal classes. If we add the pauper element to the criminal, imbecile, and insane, the number would no doubt reach half a million or more. Then there are the wild "wards" of the nation, the Indians, to be sustained or provided for by public charity. Altogether, this makes a large annual draft on the exchequer of towns, counties, States, and the nation. It behooves us to inquire into the management of these interests.

1. What are the causes of crime?
2. What is being done for its prevention?
3. What is being done for the improvement of prisoners?

It is safe to state that *intemperance* is the cause, directly and indirectly, of most crimes which are committed. Dis-

sipation blunts one's moral sensibilities and leaves him an easy prey to temptation. It brings him to want. His children grow up in ignorance, poverty, and vice. Being without the restraints of the civil or moral law, an outcast for whom nobody cares, the demands for food, clothing, and shelter goad the poor creature on until his immediate necessities, knowing no law, lead to criminal actions. Some intemperate men, naturally kind, amiable, and well-disposed, being cheated, insulted, pushed, or imposed upon, lose their remnant of self-control, and without thought of consequences commit a rash act, such as striking a blow, which consigns them to the Tombs and places them among hardened malefactors. Thenceforth the stigma of "criminal" attaches to their record. There are other causes which could be named, one of which is a weak will, a morbid desire to possess that which is not needed, or a kind of insane impulse to attract attention by some strange act.

Among *preventives* of crime may be named healthy generation through a normal and well-ordered parentage, right training in childhood, temperate and industrious habits, religious influences, daily devotions, useful pursuits, and right living. Those who would improve themselves should stop the use of alcoholic liquors, tobacco, gambling, wild speculation, etc., or whatever impropriety they may practice. When a man learns his natural tendencies to excess in any direction, whether it be through appetite, avarice, lustfulness, or pride, he will, if sensible, set about correcting them. Let him examine himself on phrenological principles and he will soon find where the loose screws in his character are, and how to tighten them.

HOW TO TREAT PRISONERS.

The general method is to "punish," keeping in view the old doctrine, "An eye for an eye, and a tooth for a tooth,"

which has in it much of the element of revenge. This is unphilosophical, unscientific, unchristian, unsuccessful, and even barbarous. *Restraint* is one thing, *revenge* is quite another. According to present modes of treatment in most of the prisons of this country, no thought is given to the *improvement* of the criminal. He is to be subdued, broken down in spirit, ignominiously *punished*. That is the penalty for his crime, the object of his imprisonment. A few years' incarceration in the dismal dungeon, with a limited supply of air, food, and light, and a cheerless, hopeless sermon on Sunday, with plenty of hard work during the week, with occasional floggings or other punishment, constitute the experience of most convicts. A few musty old books may be available, so, also, a few religious tracts treating on the exceeding sinfulness of sin, and, in some cases, a few religious children's papers may be supplied. The best magazines, newspapers, educational journals, and current, scientific, and sound religious literature are not supplied. The outside world—intelligent and virtuous men and women who need these agencies for personal improvement much less than the poor prisoners—is liberally supplied with them. In many instances our prison keepers are low, brutal creatures, without sympathy, without friendship, and without those high moral qualities so necessary to inspire higher aims in prisoners.

What is wanted, and what is imperatively demanded, is a complete change in the whole system. The aim of the authorities should be, first, to place in restraint all such persons as abuse their liberty and render themselves unworthy of it. Then to put such persons under such a course of training, discipline, and education as will be best calculated to call out latent faculties and to restrain those excessively developed. To teach him self-control should be the true object

of discipline. His services should go toward defraying the expenses of his keeping, teaching, and training. The idea of *punishment* should not enter into the calculation. The aim should be to make good citizens of those who are, sooner or later, to be thrown into society to repeat their crimes, or to live useful, virtuous lives.

Unless our Christian religion be all a mistake, man may REPENT, be FORGIVEN, and be SAVED! Supposing we (our authorities) should act upon this principle toward our prisoners and at least give them a chance to repent, and when found worthy restore them to civilization and citizenship! We would have all prisons, jails, and asylums converted into schools and reformatories. Prisoners should be formed into classes and instructed as in common schools. They should have daily lectures on useful and interesting subjects. At least two hours or more a day should be given to educational interests. Under such influences even the supposed incorrigible would become submissive, and begin to improve.

We do not object to the establishment of penal colonies, say in Alaska, for such as may not yield to kindly influences, and there be required to work out their sentences.

OUR INDIANS.

We have made citizens of negroes, why not of Indians? Brought under civil law, taught agriculture and the industrial arts, they would, in time, become self-supporting. Nay, more than this, they would add something to the wealth of the State and the nation. "Wards" now, they may soon become independent. It is no worse for an Indian to earn his living by work than it is for a white or a black man. While a child, treat him *as* a child; but do not keep him forever in swaddling-clothes or leading-strings. Teach him the law, how to labor, how to plant, build houses, make

homes, and live like civilized people. His bear and buffalo, deer and antelope, are rapidly passing away, and he must look to beef and mutton in their stead. Substitute fruits, vegetables, grain, etc., for food in place of wild meats, and the "savage" would soon come into civilization. Feed a dog on raw meat, and he will be violent and uncontrollable. Feed him on *cooked* meat and on vegetables, and you greatly modify his temper and general disposition. So of the Indian, so of children, so of all.

We ask our legislators to acquaint themselves with the nature and peculiarities of these classes, and to establish rules and regulations in accordance with their necessities. We ask them to apply science and common sense to the correction of abuses, and the establishment of that which is possible, and for which all good men pray, viz., a heaven on earth.

◆◆◆ "THE HARVEST IS OVER."

NOW comes a season of rest for the weary. Now towns, counties, and States will gather together their choicest productions for exhibition, competition, and prizes. Those who have the best fruits, roots, and flowers will be suitably complimented or rewarded for their enterprise and good fortune. Potatoes, pumpkins, and poultry will be exhibited with weightier objects; and splendid horses, proud, stately, and gentle, will be paraded for the admiration of all, while docile sheep, lazy pigs, and quiet cattle will receive attention. Women will "go for" the washers, wringers, apple-parers, sewing-machines, and other domestic labor-savers, while the men will compare notes as to the best mowers, reapers, threshers, etc. Boys and girls will patronize the "side shows," where may be seen a double-headed calf, a three or six legged sheep, a Rocky Mountain

rat, mouse, or monkey—according to the programme. "Admission only twenty-five cents." While the greatest curiosity on this side-exhibition is the would-be Barnum haranguing the people and trying to induce them to "fork over" the "stamps" and to enter the trap! Look out!

Our great annual State fairs are eminently educational. They teach the people important lessons. The people see with their own eyes what has been done and what can be done, and a spirit of emulation is excited which ultimates in renewed exertions in useful endeavor. Sacks of wheat, corn, rye, barley, oats, flour, cotton, hemp, etc., plump and clean, tempt the careless farmer to improve his seed for future planting, and the result is better crops. So of fruits; pomologists, horticulturists vie with agriculturists and stock-growers in attaining the highest degree of perfection. The sum total, in results, is really immense, and justifies our State authorities in making liberal appropriations for the encouragement of these national industries. We hope every country, every State, and every territory in America will have an annual fair—and now is the time to "talk it up."

It is to be expected—and yet to be deplored—that our agricultural orators will discourse *politics* rather than potatoes during the present exciting presidential campaign. We hope the chairman will do his duty and keep the speaker to his text. Let the gentlemen tell "what they know about farming" rather than what they know about the political situation.

The prospects now are that we shall be able to report at least a good, average result for the year's labor, with hopes for something more extensive for the coming year. Let everybody—husband and wife, boy and girl, the married and the single—all go to the fair.

GOOD WORKERS WANTED.

THE progress of the human race in culture and improvement for the past hundred years has not been equaled by any previous three centuries since man had a history. And this progress has been effected by a few earnest workers who have been the pioneers, and willing to bear reproach and privation for the sake of great truths. During the present century Fulton built the first steamboat, amid jeers like those which were hurled at Noah; and Professor Morse, though the glowing language of his triumph forgets it, worked on his immortal invention in an empty garret at the north-east corner of Beekman and Nassau streets, New York, wore seedy garments, and frequently borrowed fifty cents or a dollar to keep him over Sunday. The discoverer of the true mental philosophy was ostracised and driven by bigotry and prejudice from his native land, and was thus forced to carry the truth to other countries, and thus it has come to us. He who never aspires to do anything but that which is understood and accepted by ignorance will work on a low plane and accomplish but little. Aspiration, hope, faith, look upward, onward, anticipate possibilities, and, in working to push forward the world's renovation, live for the highest remunerations, and win unfading rewards. "Webster's Spelling Book" has done more service for mankind than all the Cæsars and Napoleons. He opened the channel of intelligence and improvement; they sought by force and fear to subjugate mankind.

The world has struggled to rise in the scale of being, but in many respects it has struggled as a blind giant with numerous and unknown forces. It has not properly understood its powers, its talents and propensities, and in its efforts to guide and educate the race it has been empirical, blindly trying this and that experiment, "if haply it might feel after and find" the right way and do the right thing.

When Dr. Gall announced his great discovery that the brain is not only the organ of the mind, but that the mind has numerous special faculties, each of which has its own particular organ in the brain, and that by an inspection of the form and size of the head the talents, propensities, and dispositions

of a stranger may be correctly understood, a new era dawned on education, legislation, government, theology, and domestic affection. Man was no longer the *terra incognita*, the unknown and least understood of all the works of the Creator, but his powers and capacities were revealed, his tendency to be educated in this or that line of culture, to follow this or that profession, trade, or calling was made known. A new and more humane, because a more true and philosophical, method of treating insane persons and criminals was revealed to the world; and although men have been slow to study and adopt the new philosophy, it is gradually working its way to acceptance and application in all the great departments of education and government. In the promulgation of this new and beneficent system of reading character and applying it to the guidance of youth in their moral, social, intellectual, and secular education and training for usefulness and happiness, we have spent a third of a century of time and the strength of our manhood, and having lived to see the time when thousands accept and few decry it, we are desirous, before our day of working is over, to train and cultivate many good men and true to take and more than fill our places. Accordingly, we give instruction in the science of character-reading to such as earnestly wish to master the subject and promulgate it theoretically and practically. Our course of instruction will commence on the 13th day of November next. All who have a desire to become members of that class will receive, on application, with stamp for postage, a circular giving an outline of the course of instruction, the topics treated, the books required by students, and the terms. Please address: "Office of the PHRENOLOGICAL JOURNAL, 389 Broadway, New York."

CORRECTION.—In the July number, page 54, we stated that a law had been passed giving the cities and towns of the State of New York the privilege of voting license or no license to sell liquor in the several places respectively. A friend calls our attention to the fact that the Governor vetoed the bill—so that the bill which passed the legislature is *not* a law after all. The more's the pity.

DEATH OF PRESIDENT JUAREZ, OF MEXICO.

BENITO JUAREZ, whose name is so intimately connected with the stormy history of Mexico during the past twenty years, who played so conspicuous a part in the conflict which resulted from the attempt of Louis Napoleon to found a French empire on Mexican soil, is dead. According to advices lately received, he died of apoplexy on the 18th of July last.

was, evidenced his superior organization for work, for executiveness. He was a man to lead affairs. In person he was thick-set and somewhat awkward. His face evinced his Indian origin, being dark in complexion, with coarse, heavy features, but an expression at once kindly and powerful. When he spoke with animation his face assumed a tone of true nobility. His oratorical power



A sketch, together with a fine portrait of this well-known Mexican leader, was published in the *PHRENOLOGICAL JOURNAL* for August, 1867, and from that we derive the following remarks concerning his character. The head of Juárez was not a bad head; it was long and high rather than low and broad. Vitality, strength, and endurance were his in a marked degree. High culture would have made him much more of a man than he has appeared to the world; what he

was considerable. His career, briefly summed up, was the following:

Born in humble circumstances, he was educated by a wealthy family in Oaxaca for the profession of the law, in which he gained considerable distinction. He went through the whole judicial range of the State until he came to the position of Supreme Judge. Elected deputy to the Constitutional Congress of the Republic, he took a prominent part in 1846 in the proceedings of that stormy

period. From 1848 to 1852 he was Governor of his native State, Oaxaca. In 1853, during the administration of Santa Anna, he was banished for a short time to Cuba, whence he proceeded to New Orleans, in which city he resided until the spring of 1855, when he joined Alvarez at Acapulco. When Alvarez was selected President of the Republic, Juarez became Minister of Justice. Alvarez retired from the Presidency in 1855, and Juarez then left the cabinet in conjunction with all the other ministers. Comonfort, who succeeded Alvarez, appointed him Governor of Oaxaca, the administration of which office he discharged with eminent success. He was subsequently made Secretary of State, and afterward became President of the Supreme Court of Justice. When Comonfort withdrew from the Government, in January, 1858, Juarez became, by virtue of his office, Constitutional President of the Republic. On January 19, 1858, he established his Government at Guanajuato. The civil war which shortly afterward broke out compelled him to remove the State Government to Colima.

In 1863 the French, by a series of intrigues which it is not necessary now to detail, became firmly established in the heart of Mexico. The Juarists were still dominant in Southern Mexico and the Pacific ports of the Republic. The contest between the Juarists and the Imperialists continued with varying fortunes until the early part of 1864, when Maximilian arrived at the capital and was proclaimed Emperor. That year was an eventful one in the history of Mexico. The surrender of Cortina and his army, the fall of Matamoros, and other reverses seemed to leave the cause of the Republic hopeless; but with the close of the American Rebellion the life of the empire ebbed away. Juarez, who had been driven into the extreme limits of Mexico, gathered new strength, and by October of 1865 had recovered a large amount of territory. In November the Imperialists evacuated Chihuahua. At this time a new element of danger arose by the expiration of the constitutional term of President Juarez. Gen. Ortega, President of the Supreme Court, became the legitimate successor, but a change of leaders at such a moment, fraught with danger as it was to the cause, was ended, though not without unpleasant complica-

tions. The whole matter, however, practically remained in abeyance until the close of the year, Juarez having possession of the office and the support of patriotic Republicans, and Ortega a legal right only.

Finally, in the autumn of 1866, the United States sent a special mission to Mexico, "accredited to the Republican Government of which Mr. Juarez is president," thus recognizing more formally than before the official position of Juarez. Meantime the Imperialist forces were gradually driven in toward Queretaro largely depleted by the departure of a portion of the French contingent. In December, 1866, Bazaine with his forces formally withdrew, and the beginning of the year 1867 found the Empire of Maximilian slowly crumbling to pieces. On the 15th of May the Liberal forces entered Queretaro and took prisoners the Emperor, his staff, and the little remnant of his army. On the 15th of July Juarez, Constitutional President of the Republic of Mexico, returned to the ancient capital of his country amid tremendous popular rejoicings, and issued a memorable and eloquent address. On the 14th of August of that year an election was ordered for the choice of President of the Republic and Members of Congress. Porfirio Diaz was the candidate in opposition to Juarez, but Juarez was reelected on the 6th of October. Congress was convened on the 8th of December for the first time in three years.

Of the succeeding events, the death of Maximilian, the domestic difficulties of the Republic, and its financial embarrassments, it is not now necessary to speak. But, encouraged by the moral sympathy of the United States, and by the revival of internal commerce, the country rapidly recuperated under the wise administration of President Juarez. This prosperity, however, has continually been interrupted by revolutions and pronunciamentos of more or less importance. The strongest combination formed against Juarez was in May, 1868, when Rivera pronounced in favor of deposing Juarez. The revolutionists, however, frittered away their strength, and under the discreet management of Juarez the Government became solidified, and Lerdo de Tejada became Chief-Justice of the Supreme Court in place of Ortega. This position places him in the line of succession, and he is now acting President of the Republic by virtue of his office.

Department of Literature, Science, Education.

MIXED SCHOOLS

SHALL BOYS AND GIRLS BE EDUCATED TOGETHER?

INASMUCH as boys and girls are born of the same parents, and inasmuch as men and women, for mutual benefits, prefer to live together, and do live together and not separately, save in monasteries and nunneries, we can see no good reason why young men and young women should not be educated together. The President of Eminence College, Kentucky, in his annual catalogue for 1872-3, gives his views on this subject as follows:

"The idea adopted and acted upon by Roman Catholics, and concurred in by Protestants generally, that the only way to strengthen the minds and improve the morals of youth so as to qualify them for the discharge of the active duties of life, is to seclude them from the world during the period of their training by immuring them in cloisters, is gradually giving away before the light of intelligent experience and philosophic observation. Protestant nunneries, as schools of education and discipline, are fast becoming as unpopular as Catholic convents have already become. A young lady, educated in entire seclusion from the world, upon whose great theater she is soon to enter as an actress, is but ill provided to meet the responsibilities and discharge the duties which will devolve upon her when she assumes her place as a constituent element of society. No system of education is natural that ignores the relations that the God of nature has established, and no amount of theory can compensate for the loss of experience which can only be gained by daily contact with those with whom we are to be associated in subsequent life. Consequently, all systems of education which separate the sexes while they are being prepared for the duties and responsibilities of life, are founded in ignorance of the true constitution of mankind, and the real nature of virtue. It is a well-known fact, patent to all, that brothers educated under the refining and sanctifying influences of sisters, are more firmly established in all the principles of a high and noble manhood than those who do not enjoy such hallowing influences. The same may be said of sisters nurtured in the daily association with brothers. They are developed into a stronger and holier womanhood, and, conse-

quently, are better qualified to discharge the duties of active life.

"God, who created man, and thoroughly understood the wants of his being, saw that it was not good for man to be alone, and all human experience attests the truth of Divine omniscience, that there is no period in man's existence, from the cradle to the grave, when it is good for him, either morally or intellectually, to be alone—apart from the refining presence of the opposite sex. After an experience of twenty years in the management of schools, we give, as our settled conviction, that higher intellectual development, and greater moral purity, can be attained by the co-ordinate education of the sexes than can be reached when their education is conducted in separate institutions. And this opinion is fast obtaining among the enlightened educators of the age.

"There is an energy of spirit, and a moral polish of character, which this system has demonstrated as perfectly practicable, and has exhibited as a natural, necessary, and rational result, which has not and cannot be obtained in any other way.

"EXPLANATION.—When we say that ours is a mixed school, we do not mean that the boys and girls form one department. On the contrary, each department is distinct, and will remain so; yet the entire school is brought together in the chapel every morning for the purpose of prayer, reading, and for such remarks as the president of the institution may think proper to make on biblical history, general literature, or any subject connected with the intellectual or moral improvement of the students. A weekly report of the department and progress of each pupil is made in the presence of the entire school. Thus the presence of the one sex exercises a salutary influence on the other. Ambition [aspiration] to excel in the acquisition of knowledge is aroused by an active stimulus, and that courtesy of manner is cultivated which characterizes the true gentleman or lady. This scholastic union of the sexes is vastly promotive of purity of thought, propriety of manners, and correctness of life.

"Another advantage which is worthy of

special consideration is, that brothers and sisters can be educated under the same roof, so that the ties of natural affection are not weakened, as is the case where they are educated in separate institutions."

[Referring to matters special to this college, the president says:]

"It is with genuine pleasure that we record the fact that the prize offered by Professor Wood, of Michigan University, for the solution of a problem in mathematics, and unobtainable for several years, was carried off this session by a young lady graduate of Eminence College. To these we point with peculiar pride, and appeal to them rather than to magnificent buildings and munificent endowments, in proof of the hale and progressive life which prevails at Eminence College. Every year's experience enables us to make improvements on the past, and every year we are adding to our facilities for imparting knowledge and increasing our sphere of usefulness."

[In the same catalogue is printed an eloquent and logical address on "The Educational Problem," by Mr. W. S. Giltner, from which we extract the following:]

"The question is: How can the highest culture for both sexes be secured without injury to the health, without prejudice to the intellect, and without detriment to the morals of either? For it is conceded that the object of every symmetrical education is to secure the highest condition of physical health and development, the broadest expansion of intellect, and the most exalted elevation of morality and virtue.

"Pythagoras made a true education consist in the 'harmonious blending of all the elements of character, so that they should tend to a single end.' He fails, however, to tell what that single end should be. Plato defines a good education to consist in 'giving to the body and soul all the perfection of which they are capable.' Perhaps a briefer or more comprehensive definition has never been given. Milton regards an educated man as one who is 'fitted to perform skillfully and magnanimously all the offices, both private and public, of peace and war.' Kant says that there is within man a 'divine ideal, the type after which he was created—the germs of a perfect person,' and that it is the office of education to form and direct the growth of these germs. That man only is truly educated, in the judgment of Mr. Huxley, 'who has been so trained in youth that his body is a ready servant of his will, and does with ease and pleasure all the work

that, as a mechanism, it is capable of doing; whose intellect is a clear, cold logic engine, with all its parts of equal strength and in smooth working order, ready like a steam-engine to be turned to any kind of work, to spin the gossamers as well as forge the anchors of the mind; one who, no stinted ascetic, is full of life and fire, but whose passions are trained to come to the heel by a vigorous will, the servant of a tender conscience, who has learned to love all beauty whether of nature or art, to hate all vileness and respect others as himself'

"All these definitions have in view the complex nature of man; and we may regard it as settled that no system of education can be symmetrical which does not secure physical health and strength, intellectual expansion and culture, and spiritual purity and development."

[After discussing other points, Mr. Giltner comes to this:]

"SHALL WOMEN BE ADMITTED TO THE PRIVILEGES OF A HIGHER EDUCATION?"

"There is but one theory of education for man and woman, just as there is but one morality and one religion. Grandly human, with larger hearts and wider sympathies, having more objects of intelligent love and reverence to render their minds more awake to the truth and more receptive of it than man, to refuse woman access to all the fields of knowledge open to man is to do both sexes gross injustice. If girls are excluded from equal privileges and equal honors, it is a loss not only to themselves but to society at large. The noble words of Cranmer, when protesting against the monopoly of high education by the rich to the exclusion of the poor, may be applied, with a slight alteration, to the monopoly of all higher education by men: 'To exclude women from the benefits of learning is as much as to say that Almighty God should not be at liberty to bestow his great gifts upon any person nor anywhere, but as we and other men shall appoint them to be employed according to our fancy, and not according to His most holy will and pleasure, who giveth His gifts of learning and other perfections in all sciences unto all kinds and states of persons indifferently.'

"Shall the youths of both sexes be educated separately or together? While there are abundant reasons why their education should be conducted unitedly, these do not weigh so much with the public as the logic of successful experiment. While some of the old and famous institutions of learning in this country

and in Europe have been convulsed with angry disputations over the question of admitting women to a share of the educational advantages and privileges, others more wisely have quietly addressed themselves to the solution of the question, and without any controversy have appealed to experiment, the crucial test, as the best and surest way of arriving at a satisfactory conclusion. No great social disturbance or moral or religious upheaval has followed this innovation upon established usage; but, on the contrary, the superior morality of the young men and the higher intellectual culture of the young ladies have been the gratifying results. The appeal to experiment rather than to debate or explanation has proved the wisdom of the advocates of this reform. There is no logic so irresistible as the logic of events, no argument so incontrovertible as the argument of success; and now all the more enlightened educators have accepted the situation, or are preparing to accept it. Fifty colleges in the United States have already admitted young ladies to their classic halls, and Princeton and Harvard and Yale are preparing, it appears, to yield to the onward march of progress and reform. The hitherto invulnerable barriers that have opposed and resisted the elevation of woman are now broken down, or are being removed; and women are now admitted to the University of Vienna, of Paris, of Moscow, of Glasgow, and Cambridge, and we may safely predict that at no distant day they will be admitted to every college and university, both in the Old and in the New World. And why not? The male colleges are already established, and furnished with libraries, museums, laboratories, and all the facilities of mental training, and if women are to have a higher and better education, why not use the facilities and means already accumulated and available? These institutions are in the full tide of prosperity, and it would take many years to create their equals for women, even if it were possible in this country to double the teachers of learning and experience. The present colleges will long remain the best, and why should girls be excluded from the best? The distinguished editor of the *Christian Union*, H. W. Beecher, in a recent article on Amherst College, pithily says: 'It seems as absurd to have a double set of institutions with double officers and double expenses to give education to men and women as it would be to have double churches with double pastors and double expenses for the sake of preaching the gospel separately to wo-

men.' The time has come when the monkish institution—the male college—should be abolished, or converted into one where both sexes have equal privileges and enjoy common advantages. During the supremacy of Catholicism, when the notion prevailed that woman was a temptation and a snare to man, it was thought necessary, and even now some deem it wise, to seclude young men and young women from general society and the sight of each other during the period of the mental training. An idea so unnatural and so at war with all the laws of our being was surely 'conceived in sin and brought forth in iniquity.' The sooner society is emancipated from the bondage, the sooner it will advance to more exalted virtue and serener purity.

"I believe it is generally understood that a 'boys' academy' or a 'male college' is a terror to the surrounding community. In the majority of cases the pupils are regarded and treated as a tribe of Bedouin Arabs, and they are not slow to prove themselves thorough Ishmaelites. As public sentiment cuts them off from all sympathy with the community at large, and thus engenders a mutual hostility, is it any wonder that there should be a constant recurrence of petty annoyances on the one part, and of unsuccessful attempts to bring the culprits to justice on the other part? Is it any wonder that young men taken away from family restraint and home life, and suddenly introduced into college with no womanly influence or womanly presence to restrain them, should repeat the stale jokes and traditional tricks that have been transmitted from one generation of students to another? How can these evils be remedied? By infusing into the schools a larger amount of the homelike element. The best test of a good school is that it intensifies the good qualities that prevail in the family, develops a wealth of motive that augments that of parent and home. The organic dependence of one sex upon the other is a fact that should not be forgotten or ignored in the methods of school keeping and college training. The more of the family element you can introduce into an institution of learning, the more successful it will be.

"Conflicting notions prevail as to the best methods of securing the highest intellectual culture together with the greatest moral purity. The formation of correct mental habits and the establishment of strong moral principles is the desideratum in every well-devised system of education. That the judicious blending of the sexes in school life will do much to facili-

tate the desired end is a conviction that has been growing in the minds of careful observers until it has now become a well-nigh universal principle of acceptance and adoption by the most advanced educators of the day. That the association of the sexes in all the eras of life was the intention of the Creator seems evident. See how He has adjusted the families of earth—not all boys, not all girls, but male and female, thus inducing that perpetual variety in which nature delights, softening and strengthening the two types of character in a way impossible by any other means except actual contact and impression. It is useless for men to fight against God's decision. When He settled the 'solitary in families,' He settled the question of the relations of the sexes. While brothers and sisters continue to be born, it will be best that men and women shall be associated in all the affairs of life. They were created for each other; they need each other's aid and influence; there is no great superiority of the one over the other; men are not so much wiser than women, nor women so much nobler than men, that either have any peculiar ground for boasting. It is evident that originally they were meant to live together, and it is several thousand years too late to fault the arrangement or to improve it.

"Equality of opportunity and equality of education is the only foundation of high and harmonious civilization. I do not claim that there should be absolute uniformity in education, for uniformity in one or both sexes is an injury, while variety is a benefit. Varied and vigorous culture should be afforded to both sexes alike.

"If organization and adaptation indicate function and sphere, then the spheres of man and woman do not antagonize, but intersect, complement, and harmonize with each other. Woman is different in organization and texture to a limited extent from man, but the distinction is relative to him. They are bound together by natural relationship so intimate, so vital, so mutually dependent, that neither is absolutely complete without the other. They were created for each other socially, morally, and intellectually, and they cannot be separated from each other without moral and intellectual detriment. In the eloquent language of President Raymond, of Vassar College (an exclusively female institution), 'I am one who do not believe in the limitation of the sphere of woman. Wherever it is right for man to go, it is right (I do not think it always expedient, but it is right if expedient) for woman

to bear him company. In whatever form of labor he may honorably engage, she may honorably be his associate. In a word, through the whole circle of his relations to this world and the world to come, in the entire conduct of life, it is the privilege of the woman to be his counselor and his helper, with no limitation but that of her ability.'

"I wish now to make a brief review of the effects of co-education upon the colleges, upon the young men, and then upon the young ladies, and I shall close.

"EFFECT UPON THE COLLEGES.

"It is claimed that it will lower the standard of scholarship. This is a grievous evil and a grave charge, if true. But what is the testimony of experience on the subject? Chief Justice Cooley, a professor in the University of Michigan, says the standard of scholarship has not been lowered by the admission of women to that institution, but the tendency has been in the other direction. Again, it is claimed that 'sloppiness and inaccuracy of scholarship' will be another evil, and yet the testimony of the committee of investigation from Cornell University to ascertain the truth in the matter is the very reverse of this. In their report, page 29, they say: 'If "sloppiness" and want of point are inadmissible anywhere, it is in translation from the more vigorous and concise of ancient and of modern authors. Now, the most concise and vigorous reading from the most concise and vigorous of all—Tacitus himself—was given by a young lady at Oberlin College. Nor did the committee notice any better work in the most difficult of the great modern languages than that of some young women of Antioch College.'

"The Professor of Mathematics in Emence College bears testimony also to the ability of young ladies not only to attain respectable standing in the highest department of Mathematics, Differential and Integral Calculus, but for rapidity, accuracy, and clearness of solution and explanation to be the peers of the young men. Principal Hoose, of the State Normal School at Cortland, says: 'My experience covers eight or ten years of college life, where both sexes recited together, and attended college on equality of privileges. Their scholarship was as good and their conduct better than when the sexes were separated.' We conclude that colleges will not suffer in reputation, dignity, or scholarship by co-education.

"EFFECT UPON THE YOUNG MEN.

"Does it render them effeminate? Does it make them coxcombs and dandies? Do they

lose their manly qualities? No. It quickens the pulse of every manly principle and stimulates every noble quality that enters into the composition of the masculine nature. It prevents the formation of those baneful secret societies which keep young men up till dawn indulging in 'larks,' that are so destructive to both health and morality. Profanity and obscenity, that are so prevalent in male colleges, are not tolerated in mixed schools. Words and actions that are unchallenged among boys will be forbidden in the presence of girls. The introduction of women into many of the older colleges would soon work the downfall of many abuses, correct many existing evils, and remove many barriers in the way of their healthy progress. It is the testimony of Dr. Fairchild, President of Oberlin College, that the co-education of the sexes is the surest way to make men of boys and gentlemen of rowdies. Prof. Frieze, formerly the honored acting President of Michigan College, says: 'One fact may be of interest. The janitor who has been in service four or five years has repeatedly said, and still says, that the conduct of the students in moving from room to room, and especially in passing up and down the staircase, is greatly improved. They are almost free from crowding and shouting; and he is sure that this increased gentleness is due to the presence of ladies.' The better morals and habits of active study are greatly improved by the presence of an exciting stimulus.

"EFFECT UPON THE YOUNG LADIES.

"The anxiety is in reference to them, for it is admitted that it will improve the boys. Will it then make the girls boyish? Will it blunt their sense of feminine delicacy? Will it obscure their perception of what is becoming and appropriate to their sex? Will the young women ape the fashions, the follies, and even the vices of young men? And when they go into active life, will it make them seek the arena of indiscriminate and equal competition, and will they become bold and blatant advocates of 'woman's rights,' and clamorous and positive asserters of 'woman's wrongs?' Will they become such characters as 'Miss Stella Cerulian' and 'Miss Audacia Danger-eyes,' the 'illuminati' of the advanced wing of the free-love party? If this were the effect, then away with all schemes for liberal education of woman, and let her education be relegated to the nunneries and cloisters of the dark ages, or let her be returned to the ignorance and degradation of the night of barbarism that for centuries brooded over the earth. But

such has not been the effect, as every one who has tried the experiment is ready to depose. In convents, where girls are put under most rigid surveillance, they rapidly deteriorate in prudence, truthfulness, delicacy, and sense of honor. There is nothing that impresses a young lady with a higher sense of her dignity than to be placed on the same intellectual plane with man, in competitive exercise and pursuit in the same branches of learning; and her ambition to excel calls into play all the noblest elements of her character, and gives prominence to all those distinctive womanly qualities that make her peculiarly an object of love and admiration.

"Another benefit to the young ladies is improved physical robustness. The enervating tendencies among girls trained in ascetic schools has been proverbial. But contact with healthier and more vigorous natures will cause them to give more attention to physical culture, and to acquire more thorough knowledge of the chemistry of common life.

"SUMMARY.

"Too much should not be expected, nor in fairness ought to be required, of the simple combination of the sexes in the same school. We must not imagine that co-education will at once and forever correct all the evils of college life. It must be remembered that colleges are open to all the world, and out of every hundred gathered into a college, mixed or otherwise, you shall find girls who are veritable hoydens, and boys who are downright rowdies. Mere association in school life will not materially reform those, or signally reconstruct these. To such termagants more restrictive measures than the school affords must be applied, and for incorrigible vandals neither the school-room nor society, but the work-house, the navy, or the chain-gang is the proper place.

"The advantages of co-education are so manifest that there is no need for us to reiterate them here. The teachers of mixed schools universally testify with pleasure to the brilliancy and life which the enthusiastic and intuitive mental action of woman imparts to the recitation room; how she stimulates the dull laggard to sprightliness and industry, restrains with her presence any exhibition of immorality, and infuses into his soul the strength of purity and the energy of aspiration. This association of the sexes awakens in time a correct appreciation of each other. They see each other in their every-day clothes, without paint or powder, tinsel and gewgaws, in earn-

est preparation for life-work, and they learn to set value not so much upon outward adorning as upon the charms of the intellect and the graces of the heart. Actual contact dissipates all the false glamour and golden aureola with which boys and girls, when isolated, invest each other. They indulge in no heartless coquetries, in no romantic dreamings, in no slavish sentimentalisms; and we have yet to learn of the first elopement from a mixed school or an act of scandal therein.

"This plan of education is vitally connected with the progress and elevation of the human

race, and until this more normal method has been universally adopted and the educator stands the sentinel of truth and virtue, like Milton's personification of purity, in the Mask of Comus, until the manner and matter of the Great Teacher are more deeply studied and fully comprehended, and the spirit of love and self-denial that characterized the Son of God fills every intelligent teacher, Christianity, the chief glory of manhood and the brightest gem of womanhood, will never attain the zenith of its power and the meridian of its splendor."

WHO ARE THE HAPPY?

It is not he with coffers filled
With silver and with gold—
Spurning the child whose limbs are chilled
With winter's piercing cold.

Not he who climbs the giddy height
Where proud ambition reigns—
Who, as he urges on his flight,
The voice of grief disdains.

Not he whose cold and selfish breast
Ne'er felt for others' woe—
Who never has the orphan blest,
Nor wiped the tears that flow.

Not he who, when his neighbor falls,
Extends no friendly hands—
And when his suffering brother calls,
At a proud distance stands.

Not he who labors to destroy
His brother's worthy name—
Whose hours base calumnies employ,
His neighbors to defame.

These are not happy. They alone
Who live to bless mankind—
Who others' sorrows make their own,
True happiness will find.

THE BIBLE NEED OF THE TIMES.

NOT long since we read in the columns of a religious paper, published in New York, an earnest and powerful article, advocating a new translation of the Bible. The author, among his reasons for the demand, urged, that the present age was so much in advance, both as regards science and the analysis of moral truth, of the time of King James, that a revision of the text was needed which would be more nearly in accordance with the times; that as matters stand, young and old, learned and unlearned, have but an imperfect knowledge of the Scriptures, a fact which is conspicuous enough in the numerous and varied deductions based upon their phraseology, and which in itself makes it an imperative duty for those vested with authority in the churches to present the revealed will of God in the clearest, briefest, most forcible and attractive modernized language.

It seems certainly remarkable, when we consider the subject candidly and without prejudice, that no modern translation of the Bible in its entirety, has been published, under circumstances favorable for its introduction into com-

mon use, but that the great mass of Christians have contented themselves with the old King James translation. Since the year 1611, there has been great progress in all departments of physical investigation, and in some of these departments the advancement is little short of the marvelous. There has been marked improvement in spheres of thought related to logic, metaphysics, and philosophy in general; but it is the developments of scientific research, chiefly, which demand a revision of the translated Bible of the Christian world, on account of the many seeming, or real, antagonisms to the well-ascertained facts of astronomy and geology and ethnology, which our English version gives the warrant for existing in the original tongue. These seeming or real antagonisms are deprecated by all candid enlightened minds, both on the religious and scientific sides; for the very obvious reason, that they serve to weaken the faith of professing Christians, and to strengthen the position of skeptics. It is useless to preach the doctrine of subservience, of faith to intelligent men, in opposition to the evidence of their

senses. They will, in such cases, but turn and impeach the canon of Scripture with inconsistency, error, and dogmatism.

There have been many editions of the Hebrew Scriptures and of the Greek Testament prepared with great care and research, during the past century, but very few eminent scholars have given their attention to the preparation of what is so urgently needed, a translation in clear round English.

We find on the list the names of Boothroyd and Conquest, who, within the past fifty years, endeavored to supply the want by giving to the world new versions of the Old and New Testament. Conquest mentions twenty thousand emendations as the fruit of his effort to prepare a Bible more worthy of modern enlightenment.

Then, too, Doddridge, Scarlett, Kneeland, Campbell, Sharpe, Murdock, and a few others have published translations of the New Testament, some of them acknowledged as of superior excellence, but receiving little attention beyond the limited circle of the learned.

Within the past ten years an edition of the New Testament has been published by an American scholar under the title of "THE EMPHATIC DIAGLOTT." This work, the result of long and laborious study, combines many novel features which adapt it to popular use. These features are in brief: an approved Greek text with the various readings of the Vatican manuscript, No. 1,209; an interlineary, word for word, English translation, a new version, with the signs of emphasis; a copious selection of references, and many valuable notes. The work has already found its way into the libraries of thousands, and most deservedly, if for no other reason than the method of presenting the original text and the translation side by side. While this work has received the most cordial approval of many eminent clergymen and others who have some title to general consideration on account of their scholastic abilities, it remains to be seen whether or not, like the others, it will be treated with cold neglect.

Having an opportunity to examine this work recently, we deem its merits a sufficient reason for thus bringing it to the reader's notice. In his preface, the author makes the following pertinent statement: "It is generally admitted by all critics, that the authorized or common version of the Scriptures absolutely needs revision. Obsolete words, uncouth phrases, bad grammar, punctuation, etc., all require alteration. And this is not all; there are errors of a more

serious nature, which need correction. The translators of the common version were circumscribed and trammelled by a royal mandate. They were required to retain certain old ecclesiastic words, which accordingly were left untranslated. Thus the minds of many, who had no means of knowing the meaning of the original words, have been misled and confused." He does not claim for his translation of the New Testament any marked superiority over other modern versions, but it is certain that it is superior in very many respects, and to the unlearned reader it affords some facilities for acquiring a rudimentary knowledge of that mysterious tongue in which the early apostles of the world clothed the teachings of Christ. One, in reading "The Emphatic Diaglott," has an opportunity for comparing the Greek style of composition with modern English idioms, and, if he be a man of tolerable education, he is greatly assisted in obtaining clear views of the meaning of different passages. The authorities quoted and the references make a considerable part of the book. The author has used the materials furnished or compiled by the most celebrated Biblical and Oriental philologists. Among these the texts of Griesbach, Scholz, and Tischendorf are especially noteworthy. The number of manuscripts now known, and which have been examined by Biblical scholars, is nearly seven hundred, and these certainly afford a far better chance for obtaining a correct Greek text and an improved version, than the seven or eight only which were known two hundred and fifty years ago, when the version of King James was published.

Perhaps in this connection it would be somewhat interesting to note the earlier translations of the Bible into English, going as far back as we have any authentic record. The first English version of the New Testament was made by John Wycliffe, about 1367. This was a verbatim translation from the old Latin. It was not printed, however, before the year 1781.

William Tyndale published a translation, which cost him infinite labor, and no light persecution, in 1526. The printing was done in Antwerp or Hamburg, and the first volumes, though secretly conveyed into England, were there bought up and burned. This was also translated from the Latin vulgate. The bold reformer next proceeded to prepare a version of the Old Testament out of the original Hebrew, and, in 1530, published the Pentateuch, and the following year the book of Jonah.

The first English version of the whole Bible

was published by Coverdale, in 1535. The next effort was called *Matthew's Bible*, which was simply Tyndale's version revised by his friend, John Rogers. He also translated those books in the Old Testament which the martyr had not been able to labor at. This was finished in 1537. A translation of the New Testament was printed in 1538 by *Hollybushe*.

The great Bible, usually called *Cranmer's*, because he wrote a preface to it, appeared in April, 1539. It was a revision of Tyndale's.

In 1557 appeared the famous *Geneva Bible*, so called because the translation was made there by several divines who had fled from England on account of persecution. This edition—the first printed in Roman letter—was accompanied by notes showing a strong leaning to the views of Calvin and Beza. It is best known, perhaps, as the "*Breeches Bible*," on account of the rendering of Genesis iii. 5, in which the word now generally read "*aprons*" was translated "*breeches*."

Next we have the *Bishops' Bible*, another revision made by the bishops, and published in 1568. In 1582, an English version of the New Testament, executed by several Roman exiles, was brought out, and in 1610 a similar version of the Old Testament was published at Douay. Both were taken from the vulgate, and form the standard English Scriptures of the Roman Catholics.

Now we come to the version which has been in use for over two hundred and fifty years, and is generally known as *King James' Bible*. This was published in 1611. It was prepared by some forty-seven scholars and divines, who were appointed to revise the translation then in common use. They were ordered to use the *Bishops' Bible* as the basis of the new version, and to alter it as little as the original would allow, comparing, however, the prior translations of Tyndale, Coverdale and others. It may be said here that originally fifty-four scholars were nominated for this work, but only forty-seven undertook it. The result of their efforts was, perhaps, the best that could be made at the time, and yet we are told that "If it had not been published by kingly authority, it would not be venerated by English and American Protestants as though it had come directly from God." Those translators had only the advantage of eight manuscripts, none of which were earlier than the tenth century. Now, as we have already mentioned, there are seven hundred, some of them of very ancient date.

Scholars and divines have, for generations,

through the press and from the pulpit, exposed many misinterpretations in the received version. In fact it has been convicted of containing over thirty thousand errors. There are some thousands of words which are either mistranslated or too obscurely rendered, besides others which are now obsolete through the improvements in the language which have been made in the lapse of years. It is also too highly colored with the prevailing ideas, political and ecclesiastical, of that early period of English Protestantism. Dr. McKnight says, "it was made a little too complacent to the king, in favoring his notions of predestination, election, witchcraft, familiar spirits, and kingly rights;" and these, it is probable, were also the translators' opinions, and hence their translation is partial, speaking the language of, and giving the authority to one sect, being, of course, the English Church.

Whether the Bible be an inspired book or not, is not the subject we would discuss, but it is only fair to claim that if it is to be regarded by all as a standard of faith and morality, its phraseology should be rendered clear, consistent and apace with the times. In a matter of such exalted importance as religious sentiment and conviction, the world has a paramount right to the best teaching—to a Guide that can not mislead.

WEST POINT STUDENTS.

IT is generally supposed that West Point students, in order to go through and be graduated, must have considerable talent and physical stamina. It is certain that some students who undertake to go through drop out year after year, and only about sixty per cent. who enter finish their course and graduate.

It is interesting, however, to look over the standing of the graduates, fifty-seven in number, who graduated on the 14th of June last. In general the pupils who rank from number one to number ten in ultimate standing, have a high grade all the way through. For instance, the student who stands number one in engineering stands as low as thirteen in discipline. That is his widest range; but he ranks number one in general merit.

He who ranks number one in cavalry tactics ranked, according to general merit, thirty-eight; showing that for cavalry tactics he had both taste and talent, but a less than average talent for the other five departments. He who takes rank number one in ordnance and gunnery, is as low as fifteen in discipline, yet he ranked

number two according to general merit. He who stands number one in ethics and law is as low as thirty-five in engineering, and as low as twenty-six in cavalry tactics; and he who is number one in discipline ranks as number eleven in ethics and law. It seems evident that the talents requisite for ethics and law differ from those which relate to engineering and cavalry tactics; and when one stands highest in cavalry tactics and considerably below the average according to general merit, it would seem that cavalry tactics are rather a mechanical and routine accomplishment than a matter of comprehensive intelligence. We notice, of course, that those who rank lowest according to general merit rank low all the way through.

But, speaking of low and high rank, we remark that he who stands at the bottom of the list is not necessarily a poor scholar—the others are simply in advance of him. It requires talent to enter and perseverance to go through at all; and he who can graduate at West Point may entertain a just and laudable pride, and he who ranks highest, of course, may not de-

serve most praise for effort, because he may have the most natural capacity, the best health, etc.; still, it is a proper source of congratulation, because with ever so much natural ability study and diligence are required.

Phrenology and Physiology applied to students would give in advance the rank they would be enabled to take. One of the crying evils which stand in the way of success in study, in all colleges and high schools, is the ill condition of the brain and nervous system induced by bad habits and wrong modes of living. If tobacco and alcoholic liquors could be laid aside by all students, the standard of attainment would be greatly elevated, and hundreds who break down and go home disappointed if not disgraced, might take high rank as scholars and in their subsequent career. Some years ago *Harper's Weekly* gave a fine large engraving entitled, "College Life." The scene was laid in New Haven. There was a group of thirteen students on "the green," and eleven of the thirteen had pipes or cigars in their mouths. "College Death" would have been a better title.

BREAKING HORSES,

ACCORDING TO SCIENCE AND HUMANITY.

READERS will remember what a *furor* was created in England a few years ago by Mr. Rarey, an American, who gave practical instruction in the art of subduing vicious horses, and public exhibitions of his skill. For these services he was rewarded by the heartiest thanks of the "Britishers," and a purse said to contain £20,000, or \$100,000. This Mr. Rarey was a quiet, cool, self-possessed person, of gentlemanly bearing, and religiously disposed. There were two or three brothers of Mr. Rarey who understood and practiced the art of horse-training throughout the United States. We met one of them in Lexington, Ky., in the winter of 1859, and later, in Cleveland, O., where he was engaged in giving lessons to gentlemen, and to hostlers who had intractable, tricky, or vicious horses to manage. For a sum of \$10 the secret was imparted, and the student felt himself master of the art and of his horse. These Rareys were, indeed, public benefactors; they taught thick-skulled and low, brutal stable men and drivers how to manage horses by kindness, authority, and self-con-

trol. There was no whipping, no scolding, no kicking, no cruelty in the programme, but the exercise of Christian kindness, gentle authority, self-possession. No timidity, jumping, jerking, nor fear was manifested. The man was master; and though for a time still and silent, he so impressed the horse that further rebellion on his part was not attempted, and the teaching and training went on successfully. The worst temper was easily subdued, and the most stupid horse, zebra, or donkey was made docile, submissive, and obedient. We have now another horse-tamer in the field; his name is Daniel Magner, a resident of New York. We present his likeness, together with a sketch of his life, character, and work.

DANIEL MAGNER, THE HORSE-TAMER.

This gentleman has a very sensitive and susceptible organization; he has a thin skull, a large and intense brain, and a great deal of magnetism. He is one of that temperament which influences an audience or a

social group or an individual, by a kind of earnestness of feeling which takes hold and wins. He is very positive in his spirit; has the courage to act promptly and earnestly; has a kind of *vim* and vigor which would enable him in an army to lead men, and make them feel willing to follow him; would impress them with the idea that he knew what he was about, and it would be safe to go where he led.

He has the love of justice, which makes him sincere and faithful; he believes in the

truth; is not by nature a man of tricks and subterfuges; there is nothing like an undercurrent about him; he believes in himself and in his subject. He has

Cautiousness large, and always measures the difficulties he has to meet, and keeps a sharp eye out for the safe and winning side.

He has strong affection, is capable of ardent love, interests woman readily, especially if she be of the brunette complexion, his natural opposite.

His love of praise is exceedingly strong, and a kindly recognition is worth more to him than money, though he is not indifferent to that, and, under favoring conditions, would show decided business talent.

He has only medium Self-Esteem and respect for himself, and, at the same time, he thinks he must win by effort whatever renown he may get.

He is very firm, decided, and determined, and, with his courage, determination, ambition, and prudence, combined with his very large perceptive organs, he is able to centralize his mind and impress others with his power.

If he were a teacher or a public speaker he would fix his eye and thought upon given individuals, and they would feel that they were personally addressed; and he would, for the time being, govern their thoughts and make them feel as he felt, and make them believe as he believed.

He is a good reader of character, comprehends motive and disposition, understands strangers; and this aids him in learning how much an animal knows, what he thinks, and how much he can understand.

His intellect is clear, sharp, and rather brilliant. He has a good talent for

talking, expresses himself clearly and quite impressively. He is a critic by nature; sees excellences and defects at a glance, and generally knows how to avail himself of every man's strong and weak points.

He is ingenious; can handle tools with skill, so far as he has had practice.

He is kind, sympathetic, warm, and quick in his temper, finds it difficult to take insult patiently; though he may be patient in many ways, he is not patient under insult.

He has not a high respect for human great-



ness; is hopeful, anticipates the good, conforms readily to usage, but has ways of his own.

DANIEL MAGNER was born in a little town in Waterford County, Ireland, in February, 1832, emigrated to America in 1843, landing in New York, where he remained some time engaged in a mechanical business. During this time he got into the habit of trading horses, and became somewhat noted for his success in the control of vicious ones; the characteristic seemed to be intuitive, and led him into the business of training and giving exhibitions. The interest he excited led to his practice of giving lessons on horse-management, etc.

His first great feats were exhibited, before the members of the Maine Legislature, in 1865. He then took four horses in succession and broke them in the presence of the members, and was recommended by the legislature to the people of the State.

From that he went through the States of New Jersey, Pennsylvania, Maryland, Ohio, and through Western New York. He spent eight or ten years in these States. He finally brought the system of subduing horses to such a degree of perfection that he was induced to come to the City of New York.

Here he invited a committee of the ablest horsemen of the city to produce any horse for him to break. They produced four of the most vicious known in the city, and they were successfully handled by Mr. Magner, to the great astonishment of the committee; the simplicity and humanity of his treatment also commanding their admiration. They indorsed him unqualifiedly.

The principles adopted by him in subduing horses are simple, and consist of first addressing the understanding; second, knowing the nature of horses; and, third, in subduing their physical power in such a manner as either to neutralize or control resistance to any extent desired, without heating the blood or exciting the passions. Not only must the understanding of a horse be clearly addressed, but the full co-operation of his better nature must be won by kindness and encouraging treatment.

Mr. Magner says that the principles laid down by Rarey were correct, but they were incorrectly carried out; they were too lim-

ited, and based wholly upon the fact of throwing the animal off its feet. Mr. Magner applies the principles of Rarey with the exactness of science; and he lays down, as particularly important, the principle that the horse must be controlled without excitement, if possible; that the passions are not to be aroused, but that his better nature is to be addressed.

His methods of carrying out these ends are most admirable, enabling him to take the most powerful horse and control him with as much ease and quickness as the smallest pony.

So thoroughly does he understand the nature of horses, that if a hundred in succession were led before him he would tell their disposition and nature better than most men would who had known and used them.

He would be the last man in a crowd to be taken as a horseman; he is naturally quiet and retiring, though when excited, especially on the subject of horses, he talks rapidly and earnestly.

HOW TO GET RID OF INSECT PESTS.

A SMALL black flea, in great swarms, eats the leaves of cabbage-plants after they come up from seeds sown in the open ground, and also early cabbage-plants, after being set out in the open ground from hot beds. A slight dusting of fresh slacked lime over the plants in the morning, while wet with dew, will drive them off or kill them. Dust the plants one morning, and again the second morning after that, then the job is finished. The flea is more fond of pepper cress than cabbages, so that if the cress is sown thinly along with the cabbage-seed, it will save the cabbages.

A greenish, mealy louse, in vast numbers, attacks cabbages when nearly full-grown. Two dustings of fresh lime will kill them.

A black grub, which lodges in the ground, eats through the stems of young cabbages, after being transplanted, causing the heads to drop off. Whenever that is observed, search around the plants, cut off, and find the grub and kill it. It is only a quarter of an inch under the surface. After it eats off one plant it gets to another, so that you must search among the neighboring plants, if not found where it has been devastating.

The wire worm lodges in the ground, and is destructive to the seeds of Lima and pole beans

and Indian corn. Plant twice as many seeds as you want plants. When they begin to push through the ground, draw the soil gently, and see if there be no worms in them. If the worms are there, pick them out with a pin or needle, and destroy.

Many of the insects that lodge in the ground may be destroyed in this way: Dig or plow up the ground in fall, or early spring; sow over it Peruvian guano or lime or salt. They are

all poison to insects. Salt should not be used where cabbages are to be planted, as it makes them club-footed.

When berry-bushes, or shrubbery, or young trees are attacked by caterpillars, two dustings of fresh lime over them, in the mornings, while the leaves are wet with dew, will kill them all. It will do the same with large trees that are infested, but it is difficult to dust them all over. —*F. E., in Journal of the Farm.*

ATOMS AND MOLECULES.

BY SAMUEL D. TILLMAN, LL.D.

THE atomic composition of ponderable matter is a fundamental postulate in the theory of chemical equivalency. By the application of the principles of experimental research, and by methods essentially modern, resulting in the discovery of many elementary bodies and their modes of combination, a conception of very great antiquity has been rendered more distinct and worthy of credence. When this conception took definite form is not known. Indeed, it is one of the many speculations naturally elicited in discussing those subtle questions pertaining to the existence of matter and its relations to mind or spirit, the solution of which has always baffled, and will continue to baffle, the most profound thinkers. In attempting to unfold the mysteries of nature, by the deductive process, the ancient teachers of Cosmogony were brought into direct conflict of opinion regarding the ultimate condition of matter. That it is composed of indestructible atoms which admit of no division, seems to have been the notion of some Oriental sages. Under the genius of the Greek philosophy this notion assumed the form and consistency of a theory.

Among those who held the doctrine, while immatured, were Ecphantus, Leucippus, and Democritus. Subsequently, Epicurus introduced such modifications and improvements as were essential to its complete development.* The Latin poet, Lucretius, in his "*De Rerum Natura*," has given a full exposition of the Epicurean philosophy; from this as well as from the writings of Plutarch, it will be seen that the most prominent atomic tenets did not differ essentially from the opinions entertained

by eminent scientists of modern times.* Newton admitted the creation of primitive particles, extremely minute but permanent. Descartes, on the other hand, held with Aristotle, Plato, and Pythagoras, that the division of matter has no assignable limit. Leibnitz attempted to reconcile the conflicting opinions of metaphysicians and mathematicians, by supposing that matter, in its ultimate condition, consists of unextended points which he denominated monads, a term borrowed from Pythagoras. At a later day Boscovich published his celebrated dynamic theory, in which centers of force are substituted for monads. Neither of these ingenious theories, however, reaches the real points of perplexity.

It is obvious that the science which treats of the ultimate composition of bodies would lead to more correct conceptions regarding minute combinations of ponderable matter. An-

* A full exposition of the ancient atomic philosophy would be foreign to the purpose of this paper. Many of the prevailing erroneous impressions concerning it would however be corrected by an examination of the third chapter of Dr. Good's "Book of Nature," in which Epicurus is ably defended against the charge of atheism. Evidently the Epicureans were opposed to Mythology; but while ignoring the power of its gods they were naturally led to the recognition of a higher Power, an Intelligent Cause, Self-existent and Supreme. This deduction was reached by the earliest believers in the atomic doctrine. According to Stobæus, Ecphantus supposed the material world to consist of atoms, but yet to be ordered and governed by a Divine providence. *Eclog. Physic. Lib. I. Cap. XXV.* And as evidence of the belief prevalent among wise men several centuries later, Berzelius, in his paper on "Proportions, Determinate," quotes from Philo, who, in his collection of the choicest philosophical ideas of his time (*Libri Sapientie, Cap. XI. v. 22*), says: "God made all things by measure, number, and weight." This remarkable statement, so far as it relates to things terrestrial, modern chemical investigations have fully confirmed.

* "Plutarch's Morals." Edited by Prof. Goodwin, of Harvard University. Little, Brown & Co., Boston, Mass. Vol. VIII. pp. 111, 112. Vol. V. p. 345.

alysis has shown that nearly all the bodies formed in the great laboratory of nature are compounds. Thus far, sixty-three different kinds of matter have resisted every effort to resolve them into simpler constituents. These substances, distinguished as chemical elements, unite in exceedingly minute quantities, according to the well-known laws of Stoichiometry. In the year 1789, Higgins, a professor in the University of Dublin, advanced the idea that certain compounds are formed by the combination of ultimate particles or atoms of different elements. Dalton, in 1803, independently arrived at a similar conclusion, which he generalized to explain the composition of all compounds, and made it the basis of his "New System of Chemical Philosophy," published five years later. The doctrine of Dalton has undergone, since his day, such modifications as render it more acceptable; but that part of it which ascribes the union of indestructible atoms to chemical affinity may be regarded as the first successful attempt to explain that primordial action which the ancient atomists could not account for, and which the Latin poet above named describes as irregular and fortuitous.

Chemists of the atomic school happily avoid the vexed question concerning the indivisibility of matter, by defining an atom as the smallest quantity of an element which can enter into the composition of a ponderable molecule; and the molecule, whether made up of one, two, or more elements, as the smallest quantity which can exist in a free state. However, a certain individuality must be assigned to the single atom, for a chemical decomposition requiring its transfer from one molecule to another, involves its isolation, *in transitu*. The absolute weight of the sixty-three different atoms cannot be ascertained; nevertheless their relative weights have been determined with great care.

It is difficult to arrive at any clear notions concerning the size of an object so minute as to be forever invisible under the most powerful magnifier. As an example of the conclusions regarding molecules, founded on microscopic scrutiny, that of the celebrated Ehrenburg may be cited.* Without attempting to make a close approximation toward its actual dimensions, his researches led him to infer that the diameter of an atom (the molecule of the chemist) was considerably less than six millionths of a line. Quite recently, Thomson, in

a paper "On the Size of Atoms,"* presented four lines of argument founded on experiments of physicists which all lead to substantially the same estimate of the dimensions of molecular structure. He says, "Jointly, they establish, with what we cannot but regard as a very high degree of probability, the conclusion that in any ordinary liquid, transparent solid, or seemingly opaque solid, the mean distance between the centers of contiguous molecules is less than the hundred-millionth, and greater than the two thousand-millionth of a centimeter. To form some conception of the degree of coarse-grainedness indicated by this conclusion, imagine a rain-drop or a globe of glass as large as a pea to be magnified up to the size of the earth, each constituent molecule being magnified in the same proportion. The magnified structure would be coarser grained than a heap of small shot, but probably less coarse-grained than a heap of cricket-balls."

From these deductions of Thomson some idea may be formed of minute molecular grouping; and I venture the suggestion that, in regard to size, the smallest bullet would probably stand about mid-way between the *glomeramen minimum* and "the great globe itself."

Beyond this point of extreme tenuity, where matter first exhibits that property which is revealed in visible forms, we are forced to consider it in a still more expanded state, as the universally diffused medium of light, heat, and actinism; consequently, this conception of the minute ponderable globule does not bring us very near the *minima natura*, for a difference in size cannot be less marked between ponderable atoms and those infinitesimal particles forming the luminiferous ether or æth, which fills the interstellar spaces, and which, in a more condensed state, probably forms the interatomic medium. Assuming that all forces generating wave-motions in elastic fluids follow the same law of propagation, I endeavored, some years ago, to estimate the density of this inconceivably attenuated substance.†

* *Nature*, No. 22, p. 551.

† Sound would be propagated, with exactly the velocity of light through a fluid, under the standard pressure, 874,094,104,900 times rarer than air. Therefore, if the density of air be 1, the density of æth is represented by the decimal .000,000,000,001,144 +.

It will not be inferred from this view that the aim has been to reach

"The first of things, quintessence pure,"

for the elastic quality of æth involves the hypothesis of a still more subtle fluid. We have raised one curtain only to find another to be raised. As the unfathomed vaults of heaven recede before the sweep of a more pow-

* *Pogg. Annalen*, 24, 35.

In that calculation, the density of air is the unit of measure. If, instead, hydrogen be taken as the unit, the density of the luminiferous ether is expressed by the decimal .0000000001658. Whatever may be its actual density, its reality must be admitted, until the positions established by the investigations of Huyghens, Young, Fresnel, Foucault, and Fizeau, are shown to be untenable. A very able American metaphysician, in meeting an objection brought by Huxley against the views of Comte, has strongly expressed his unqualified dissent;* nevertheless, the hypothesis that light, heat, and actinism are propagated by the undulations of a subtile, all-pervading fluid, is the only one which satisfactorily accounts for a certain class of phenomena, and it is accepted by all the prominent experimental physicists of the present day.

The vast difference in density indicated cannot be apprehended, because numerical comparisons utterly fail to raise in the mind any clear conception regarding a fluid so attenuated; yet it naturally suggests the idea that there must be many intervening conditions of matter in which it exists in successive degrees of increasing density, and that these conditions form the connecting links, so to speak, between its apparently imponderable and its ponderable states. Something like this opinion seems to have been maintained in a curious work published in England many years ago.† The reverend author, viewing the universe as a systematic manifestation of the Divine Will, assumes that the medium of light is the mother element from which, by progressive steps, the chemical elements have been evolved. Proceeding from the first lines of morphology he arrives at the primitive form, which cannot be isolated; then, by an exceedingly ingenious, synthetic process, he represents by diagrams his ideal structure of the different kinds of atoms, all of which are duplications of the tetrahedron. Thus he claims to reveal the unit, by multiples of which the atomic weight of all chemical ele-

ments may be expressed, and so arrives at a result which will be recognized as simply a modification of the so-called law of Prout. Although this and other remarkable surmises by Macvicar are, for reasons which need not here be adduced, quite untenable, he seems to have led the way to an assumption which has recently met with some favor, namely, that the chemical atom, although indivisible, is a collection of smaller particles. However, in following this author toward the infinitesimal, we only realize more fully the truth, that above and below the narrow zone of the visible are objects too far off and too fine for human scrutiny. Although the SEEMING ALL is rounded by intimations of other and brighter regions, Science can never compass them by any extension of her domain! In those unsounded depths which form the boundary and background of the known, thought, grown dizzy, finds no support; and even the positivist turns back bewildered when mensuration fails and computations end in surds!

On examining the numerous works on chemistry, published within the last twenty years, one cannot fail to notice a gradual change in the expressions employed in describing reactions. The word "equivalent" seems to have lost the meaning originally assigned to it by Wollaston, and the terms "combining weight" and "combining proportion" are now used less frequently than "atomic weight" and "atom." This abandonment of old forms of expression doubtless indicates a gradual change of opinion among leading chemists—a change which may be ascribed partly to an accumulation of facts tending to confirm the atomic theory, and partly to the promptings of that mysterious intuition which, overleaping the limits of logic, often arrives at correct conclusions even before their truth has been demonstrated.

During all the discussions on "atomicity" hardly a doubt has been raised as to the actual existence of the atom. It was not, therefore, surprising that the chemical world received a sensible shock at the stand made by Brodie in 1868.* However, a careful examination of his paper is likely to lead to the conclusion that the objections to the atomic theory therein enumerated, are not more formidable than those which can be urged against his own ingenious but complicated method of chemical operations. Precision in signs and definitions

* Eleventh Harvard Lecture, by Prof. John Fiske. Cambridge, Mass., 1869.

† "Elements of the Economy of Nature." By J. G. Macvicar, D.D. London: Chapman & Hall, 1856.

* "The Calculus of Chemical Operations." By Prof. B. C. Brodie. *Journal of the Chemical Society*. London. Vol. XXI. p. 367.

leads to exact results in the abstract, nevertheless a mathematical formula often requires modification to meet the varying conditions found in actual practice, and even then it only gives a near approximation to the truth.

Renewed attention to this subject was doubtless the means of drawing from the then President of the London Chemical Society a paper "On the Atomic Theory" which is generally regarded as the best exposition and defense of the doctrine yet made, and which may be consulted with profit by those desiring to obtain a clear statement of the principal results of chemical research adduced for its confirmation.*

A vigorous attack on the atomic theory has since been made by Mills, the real tendency of which is to raise doubts concerning the existence of matter itself.† He quotes with evident satisfaction from a work by Digby, "On the Nature of Bodies," printed in 1645, wherein *quantity* is defined "as but one *whole*, that may indeed be cut into so many several parts; but those parts are really not there till by division they are parceled out; and then the whole (out of which they are made) ceaseth to be any longer, and the parts succeed in lieu of it, and are every one of them a new whole." From this statement proceeds a train of geometrical reasoning concerning extension and division which leads to the old dilemma regarding finite and infinite indivisibles.

Fortunately, a new science, unknown to Digby, has demonstrated that matter has other than mere physical properties which are so clear and well defined as to enable its votaries to determine the ultimate composition of all bodies. The chemist affirms that, however inclined we may be to regard a body as a whole, it is in fact composed of minute parts which may be separated, and that in the great majority of bodies, which are compounds, nature has herself made divisions by incorporating unlike parts which may be replaced by other unlike parts. On questions relating to the actual size of these parts, their form, their structure, etc., he makes no issue; he simply asserts that all these ultimate parts are permanent, and that those composed of the same kind of matter are identical in size and structure. The limits proposed for this paper will permit elucidation of this point alone.

The clearest conception of molecules and

atoms will be arrived at by examining the principal phenomena attending the mechanical mixture and final chemical union of the lightest and the heaviest of the simple gases. The electro-positive element, Hydrogen, is a permanently elastic gas, having a relative density expressed by 1. Its properties are in marked contrast with those of Chlorine, a yellowish green gas, which may be condensed into a liquid by a pressure of about four atmospheres. The density of this strong electro-negative element is 35.5. If two vessels of equal capacity, filled with these gases respectively, be placed in the dark, one over the other, and a communication be opened between them, a mutual diffusion of the gases will commence, a relative velocity being inversely as the square root of their densities. The action continues untraversed by the force of gravitation, until minute portions of hydrogen and chlorine are equally diffused throughout both receptacles. This phenomenon cannot be accounted for, excepting on the supposition that minute parts of each gas have undergone complete isolation. If diffusion were effected only through a single stratum or extremely thin layer, it would be possible for two gaseous elements to retain their continuity by passing each other in intertwining streams, thus forming, like threads, a warp and woof; but when diffusion is in every direction it is obvious that these elements must positively separate each other, and thus be divided into extremely diminutive bodies, each of the same dimensions. Let l represent the lighter gas, d the denser, and e the dimensions or size of each isolated portion, then el and ed will denote the dissimilar parts of which the whole gaseous mass is composed. As the phenomenon of diffusion occurs under the conditions mentioned, whatever may be the quantity of gases employed, it follows that el and ed are individual volumes or molecules, invariably of the same dimensions. This diffusion of gases may, therefore, be defined as the uniform intermingling of dissimilar molecules.

If the molecules el and ed thus commingled while in the dark be exposed to direct sunlight, an instantaneous and complete chemical combination occurs, with explosive violence but without condensation; or if exposed to diffused daylight the union of elements will be gradual and without explosion; the resulting compound in each case being hydrochloric acid gas.

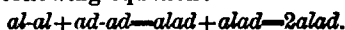
The affinity or force of chemism is generated by the action of light on the colored gas chlorine, which, by absorbing all the rays and

* "On the Atomic Theory." By Prof. A. W. Williamson. *Jour. Chem. Soc.* London. Vol. XXII. p. 828.

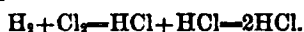
† "On the Atomic Theory." By Edmund J. Mills, D. Sc. *Philosophical Magazine*, Vol. XLII. No. 278, p. 112.

transmitting only the yellowish-green, acquires a power which seems to be expended by the union of that element with hydrogen. Early in the present century, M. Benard announced that the new properties acquired by chlorine, on exposure to light, were derived from the violet ray. In 1843 Draper proved, by experiment, the relative power of each ray in producing this change, the actinic rays being altogether the most effective.* Mr. E. Budde has recently described a remarkable experiment in this direction. He found that a differential thermometer filled with chlorine, expanded about seven times more in the violet than in the red ray of the solar spectrum; when the same thermometer was filled with CO₂, no action was noticed.†

As the combination of hydrogen and chlorine is effected without change of volume, it is obvious that the molecule *al* does not unite with the molecule *ed*, forming a compound molecule *al-ed*. The conclusion is therefore unavoidable that each molecule has been divided into two equal parts, and that, by affinity, like parts have been separated, and unlike parts united. These parts are the smallest quantities that can be isolated, and are, in fact, the atoms recognized by the chemist. If this smallest combining proportion or atom be designated by *a*, the actual composition of the hydrogen molecule *al*, weighing 2, may be clearly represented by *al-al* (weight, 1+1), and the chlorine molecule *ed*, weighing 71, by *ad-ad* (weight, 35.5+35.5). As the attraction of *al* to *al*, and of *ad* to *ad* is, after exposure to light, less than that of *al* to *ad*, there is an instantaneous chemical change by which one molecule of hydrogen and one molecule of chlorine are transformed into two molecules of hydrochloric acid gas. This reaction is clearly indicated by the following equation:



The symbols here used are intended to convey to the mind an idea of the relative size of combining parts, which is not so apparent when expressed as follows:



From the simplest of molecular types, we might proceed to the most complex; and, throughout, if we consider the combining proportion of each simple constituent as either a unit or a multiple of a unit, the composition

of each molecule may be expressed by whole numbers. Thus, having as many different kinds of units as there are elements, any true chemical combination may be symbolized by a combination of arithmetical ratios. This method, under the light of the atomic theory, clearly reveals the harmonic relations of molecular constituents, which, seen from the standpoint of percentage composition, appear unconnected and discordant.

It must be admitted that many of the reactions of well-known bodies have not yet been determined quantitatively, yet were they made out we should not be able to demonstrate, by experiment, the truth of the atomic doctrine. It still remains a theory, in favor of which there are many facts and phenomena that, collectively, form an argument not easily to be outweighed. This evidence may be briefly summarized as follows:

1. *Atomic Weights.* Elements combine in extremely minute parts, according to the law of definite and multiple proportions. The atomic weight of an element is either its equivalent weight or a multiple of it; as such multiple cannot be divided by reactions, its weight must conform with the atomic number. Whatever changes of position the combining weight of an element may undergo in a series of molecular metamorphoses—that is to say, however many times it may be displaced and replaced in chemical combinations, it invariably retains its characteristic weight. This invariability of weight is an essential property of the atom.

2. *Atomic Volume.* Gases unite in equal volumes or multiple volumes. If hydrogen be taken as unity, the density of each elementary gas is identical with the weight of its atom. The atomic volume, determined by dividing the atomic weight of a body by its specific gravity, has been the means of revealing many interesting relations among compounds of similar structure, and among many containing different components and of unlike structure.

3. *Atomic Heat.* It has been shown by experiment that quantities of each element conforming with its atomic number have the same capacity for heat, excepting only carbon, boron, and silicon; these, it is believed, will yet be found to conform to the law, that the specific heats of all atoms are the same. This law is regarded as a direct confirmation of atomic weights.

4. *Molecules.* According to the atomic theory, chemical forces are brought in equilibrium, when atoms combine and form a molecule.

* "A Treatise on the Forces which Produce the Organization of Plants." By John William Draper. New York: Harper & Brothers. 1843.

† *Pogg. Annalen* for 1871, No. 10.

Every gas and every vapor undecomposed has a density proportional to its molecular weight. All known molecular combinations and combining proportions are in accordance with the atomic doctrine. Decomposition by electrolysis affords some evidence that the constituent parts of a molecule which are simultaneously separated, are proportionate to atomic weights.

5. *Atomic Combining Capacity.* The modern doctrine of types and substitutions is solely based on the individuality of the atom, without which the whole fabric of typical structures must fall.

6. *Isomerism.* The fact that bodies containing the same elements, and in precisely the same proportions, exhibit different properties, has been thus far accounted for, only on the supposition that atoms are differently arranged in each body. These differences in arrangement depend, not only on the relative position of atoms, but also on the order, as to time, in which they combine; for two or more atoms having such precedence over others as to combine first, may, by that means, form a radical of such permanence as to play the part of an atom. Aside from the question of radicals, we may ascertain the number of different bodies which can be formed from the same number of different atoms, by an application of the mathematical law of permutations.

7. *Homogeneity.* The uniformity of structure and appearance of any element, or chemical combination of elements, furnishes the most palpable proof of the identity in size and shape of those definite parts which we designate as molecules. This homogeneity is retained under different degrees of pressure, thus making it apparent that molecules are not only identical in structure, but that they approach and recede in precisely the same manner under the same conditions.

Finally.—The foregoing statement regarding the existence of atoms which are indivisible and indestructible, under the present order of things, does not preclude the supposition that the atom may be a cluster of smaller particles held together by a powerful affinity, which, when counteracted, would leave them free to move within a given sphere. On this assumption it is highly probable that the relative position of such particles may modify the combining capacity of the atom. Moreover, the normal motion of such particles may determine, not only the peculiarities of elemental spectra, but produce other effects not dependent on the amplitude of atomic oscillations, thus favoring the inference that the atom itself is a receptacle of force.

SCOTCH AGRICULTURAL LABORERS.

THE *Scottish American* of recent date says: "A special correspondent of the London *Daily Telegraph* in an interesting account of his observations throughout the Lothians generally, describes the condition of the agricultural laborers [let Americans note the language, 'agricultural laborers'] in these districts as highly favorable compared with their English compeers. ['Compeers' is a good word in place of 'paupers.'] 'As a general rule,' he says, 'the cottages of the farm-laborers are good-sized, well lighted and ventilated, and have finely cultivated gardens attached. [But who owns them? Certainly not the occupants.] This improvement has taken place, I am told, within the last thirty years, and in out-of-the-way corners one comes upon a specimen of the old cot, wherein the plowmen of the past generation were content to live and vegetate. [Mud wigwams.] When improved laborers' dwellings have been erected, it has been done principally by the landlord, and sometimes by the tenant, with compensation at the end of the lease. In other cases it has been done by the landlord, the tenant paying so much per cent. on the outlay. The cottages are of various styles of architecture, some of them neat and pretty, others the opposite; some evidently run up for cheapness, and others again carefully and substantially built and tastefully finished. There is one difference between the cottages of Scotland, even those most lately erected, and, therefore, combining all the latest improvements, and those of England. I have observed only one instance of agricultural laborers' cottages—I refer to those at Niddry Mains, west of Edinburgh—having more than one story or flat. This at once strikes a stranger. Mylne's cottages at Niddry Mains are picturesque houses, comfortable, lofty in the ceiling, with the kitchen and back kitchen on the ground-floor and two bedrooms up-stairs. At Fenton Barns, Mr. George Hope's famous farm, there are a number of extremely well-built, commodious cottages, containing three apartments, while there are out-houses for the cow and pig, whose keep in East-Lothian constitutes an important item in the thrifty economy of the hind. [Cows and pigs here occupy different apartments. How very nice!] Another style of cottage may be seen at Liberton Mains, about three miles from Edinburgh, comfortable and roomy enough for a small family, and with neatly tended garden plots.' "

These, be it remembered, are contrasted fa-

vorably with similar houses for English farm-laborers. In Scotland, twelve men own more than half of all the land! No live farm-laborer owns an inch. When he dies, he is charitably buried in a place provided by the government. In America the great majority of "agricultural laborers" own their farms and gardens, and though they pay but a few shillings per acre, it soon doubles and trebles in value, and many become rich simply by the increased value of their lands. Oh, that the English, Scottish, Irish, German, and other European "agricultural laborers" could but see the openings in America for homesteads, almost for the asking! They would fly hither by the hundred thousand. Here we have millions of the most fertile lands, in the most salubrious of climates, easily accessible by river and rail. Why remain paupers when it is so easy to become proprietors?

GOV. B. GRATZ BROWN.

OUR sketch of Gov. Brown, given with that of Mr. Greeley, in the July number, was based on an imperfect likeness. Since then we have made a personal examination, and the following is the result:

Gov. Brown stands five feet eight inches high, and weighs not far from 120 pounds. His complexion is fair; he has light-blue eyes, light and fine auburn hair, and a soft fine-grained skin. Though of moderate stature he has a large and exceedingly active brain. His temperament is almost purely nervous or mental, the framework and vitality of the organization being scarcely equal to its mental activity. His danger lies in the direction of excessive excitability, with its resultant exhaustion and premature decay. His safety consists in "putting on the brakes," keeping cool, living temperately, and observing strictly the laws of life and health.

The phrenology and physiognomy of Gov. Brown are remarkable. The intellect, especially the reflective portion, is very prominently developed. Causality, Comparison, Human Nature, etc., are of a very high order. So also are the moral sentiments—the organs of Benevolence, Hope, Spirituality, and Veneration all large. The organs, too, of the social group are large and influential. He is generous, just, trusting, spiritual-minded, and respectful. He is something of a seer, even prophetic. He is social, friendly, affectionate, capable of enjoying in a high degree all that belongs to a happy wedlock and social intercourse. In executive

ability there is nothing wanting. He is prudent in his plans, but bold and earnest in their application, accepting the full responsibility of his conduct. He is resolute in defense, but not aggressive; spirited and persevering in overcoming difficulties, but without malice or revenge. He has artistic taste, great love for the beautiful, and a vivid imagination. He is practical, philosophical, and oratorical in mental scope.

In action Gov. Brown is supple and graceful; in manner, gentlemanly, self-possessed, confident, dignified, and self-assured. His intuitions are clear, quick, and correct. As there is no surplus of adipose in his body, so there is no mud in his brain. What there is of him is of the best quality. He is symmetrical in form, his features being clearly cut, nicely chiseled, and well defined. His forehead is a model for the sculptor; his cheeks, chin, and mouth are handsome, and the nose—slightly Roman—is exquisite, indicating high culture, great susceptibility and intense emotion. With reference to a pursuit, such a brain and such a temperament naturally incline toward professional life. He would excel in law, literature, or legislation; he would do fairly in medicine, but shine more brightly in theology. No one would sleep under his preaching. No one would leave the house till after the benediction. In business he could do something in a wholesale line, but would make "money out of pocket" behind a retail counter. He has much more taste and skill in art than in mechanism. Were there more "beef on his bones," less electricity and exhilaration in his mental nature, he would probably take life more leisurely and live longer. Though tough, wiry, and flexible, he is liable to overdo, wear out, and die young.

A BIRD STEP-MOTHER.

MR. EDITOR—I saw in the January number "Marriage Among Birds," and would like to tell, through your valued JOURNAL, what I know to be facts. While living South, in the summer of 1868, there was a school-house about one hundred yards in front of my dwelling, and between that and our house was an orchard.

There is in the South a species of birds called cat-birds, and I believe they are known in the East as the northern mocking-bird.

A pair of cat-birds had built a nest in one of the peach trees near one of the front windows, and my wife took great delight in watching

them through incubation and feeding their young. My little boy was taught not to molest them, and he felt great pride in having his bird's nest. One day a bad boy from the school began to throw stones at the birds; my son told him not to hurt his bird, but the stone struck the female bird and killed it. There was considerable fuss made in the school about it afterward.

My wife felt grieved about the young birds, and watched them and the male bird—the father of a nest-full of unfledged, motherless birds. During that afternoon the widowed bird sent forth his plaintive call for his mate repeatedly, and seemed very disconsolate. The next morning he was very industrious in feeding his young, until about ten o'clock, when he flew away and was gone about two hours, when he returned with another female bird of the same tribe. She took a survey of affairs, and hopped around on the tree. The male poured forth several snatches of his sweetest melodies, when she flew away and in a few minutes returned with food in her beak, and fed the young birds; and from that time till they could fly, she was a faithful step-mother to them.

THE NEW ERIE RAILROAD PRESIDENT.—Peter H. Watson, formerly an examiner in the Patent Office, subsequently a patent lawyer, and who, for two years during the war, served as assistant Secretary of War with extraordinary ability and success, has just been elected President of the Erie Railroad. Mr. Watson is a gentleman of strict integrity and possesses great energy and talent. We congratulate the Erie Railway on its fortunate selection of so capable an officer, and Mr. Watson on his appointment to so important a trust. If the Erie stockholders fail to receive dividends, it will not be owing to the squandering of its receipts while the present incumbent holds the office of President.—*Scientific American*.

We, too, congratulate not only the Erie stockholders, but the public, on this appointment. Mr. Watson has both body and brains, all of good quality, quantity, and in right proportions; more than this, he is a thoroughly temperate man, and his habits are excellent. There is no discount on the man. But who and what are his associates, with whom he must co-operate? Though *he* were immaculate, yet if the Directors are rogues, he would be thwarted at every step. But we shall expect a good report from this new president, whose former home was in Ohio.

WISDOM.

LET no man call God his FATHER, who calls not man his brother.

TRUTH is the property of God; the pursuit of truth is what belongs to man.—*Von Müller*.

HE is not only idle who does nothing, but he is idle who might be better employed.—*Socrates*.

ADVERSITY is the trial of principle. Without it, a man hardly knows whether he is honest or not.

LEARN the law, if you would be wise in your country; and observe it, if you would be honored.

IN life, we always believe that we are seeking repose, while, in reality, all that we ever seek is agitation.—*Pascal*.

BE not swift to take offence;
Let it pass.

Anger is a foe to sense!
Let it pass!

Brood not darkly o'er a wrong
Which will disappear ere long,
Rather sing this cheery song—
Let it pass!
Let it pass!

Strife corrodes the purest mind,
Let it pass!

As the unregarded wind,
Let it pass!

Any vulgar souls that live
May condemn without reprieve,
'Tis the noble who forgive.
Let it pass!
Let it pass!

YOU run no risk by pouring oil out of a can into your stove if you have no fire in it. Another safe way is to have no oil in the can.

IT is those who know little, and not those who know much, who so positively assert that this or that problem will never be solved by science.—*Darwin*.

MIRTH.

"A little nonsense now and then;
Is relished by the wisest men."

AN artist painted a cannon so naturally that it went off—at a very good price.

"WHAT are you digging there for?" asked a loiterer of three men who were digging a trench in the street.

"Money, zur," the answer came.

The man watched the operation until the joke got through the roots of his hair, and then moved on.

OLIVE LOGAN commenced one of her lectures at Newark, recently, with the remark, "Whenever I see a pretty girl, I want to clasp her in my arms." "So do we," shouted the boys in the gallery. For a moment Olive was nonplussed, but, recovering her self-possession, she replied, "Well, boys, I don't blame you."

At one of Lord Holland's dinners the conversation turned upon first love. Tom Moore compared it to a potato, because it shoots from the eyes. Byron added, "rather because it becomes all the less by *pairing*."

"I don't like these shoes," said a lady customer, "because the soles are too thick." "Is that the only objection?" blandly asked the salesman. "Yes," was the reply. "Then, madam, if you take the shoes, I can assure you that the objection will gradually wear away."

MISS DEBORAH BATES was married to a Mr. Joy. A local editor gave the following first-rate notice:

"No more D. Bates; dissolved in Joy,
A bride has found a home.
With pleasures now without alloy,
And other Joys to come."

IN New Hampshire the following is posted on a fence: "Nottis—Nnow kow is allow in these medders, eny men or women letten thare kows run the rode, wot gits inter my medders sforeased shall have his tail cut orf by me, Odadiah Rogers."

"If I were in California," said a young fop, in company the other evening, "instead of working in the mines, I would waylay some miner with a bag of gold, knock out his brains, gather up the gold, and run." "I think you would do better to gather up the brains," quietly responded a young lady.

A SCOTCH nurse was out with a baby in the master's garden, and the gardener inquired, "Is't a laddie or a lassie?" "A laddie," said the maid. "Weel," said he, "I'm glad of that, for there's ower mony women in the world." "Hech, mon," says Jess, "did ye no ken there's ay maist sown o' the best crap?"

"THE SMITHS."—John Smith—plain John Smith—is not very high-sounding; it does not suggest aristocracy; it is not the name of any hero in die-away novels; and yet it is good, strong and honest. Transferred to other languages it seems to climb the ladder of respectability. Thus in Latin it is Johannes Smithus; the Italian smooths it off into Giovanni Smithi; the Spaniards render it Juan Smithus; the Dutchman adopts it as Hans Schmidt; the French flatten it out into Jean Smeett; and the Russian sneezes and barks Jonloff Smittowski. When John Smith gets into the tea trade in Canton he becomes Jovan Shimmit; if he clammers about Mount Hecla, the Icelanders say he is Jahne Smithson; if he trades among the Tuscaroras he becomes Ton Qa Smittia; in Poland he is known as Ivan Schmittiweiski; should he wander among the Welsh mountains, they talk of Jihon Schmidd; when he goes to Mexico he is booked as Jontli F'Smitti; if of classic turn he lingers among Greek ruins, he turns to 'Ion Smikton; and in Turkey he is utterly disguised as Yoe Seef.

Our Mentorial Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of its early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage.

WHALING AND OIL.—I am a student, strong and robust in constitution, and have a great desire to go to sea for a year, and prefer a whaling voyage to any other, and would like to go to the North Pacific and around Cape Horn. Where can I ship, and what advice can you give me?

Ans. If you want to be gone but a year, and desire to go around the Horn to the North Pacific, you will have to modify your plan. It would take half a year to reach the North Pacific, and another half year to return. The best clipper ships boast of the feat of making the voyage to San Francisco, *via* the Horn, in a hundred days. We are not

aware that vessels have been fitted out in New York for whaling for many years past. Nantucket, New Bedford, and Boston, Mass.; New London, Conn., and Sag Harbor, Long Island, N. Y., have for nearly a hundred years been the chief places on this continent from which the whale fishery has been conducted. Some of these towns have almost, if not quite, ceased to prosecute this business. Forty years ago, New London and Nantucket were great oil marts, and their wealth and respectability had an oleaginous basis, if not odor, and nearly every ambitious boy, whether robust, courageous, and muscular and fit for the pursuit, or thin, slender, tender, and timid, looked fondly to whaling as a source of success and honorable standing. The business of whaling, we believe, is waning—not that less oil of some kind is used, but that substitutes for whale and sperm oil have been developed.

Twenty-five years ago the streets in portions of New York and Brooklyn were lighted with whale oil, or at least "darkness was made visible" by such an attempt at lighting. Now, many small country towns are fully lighted by gas. Lard oil

has been largely produced as a substitute, and petroleum has, for illuminating purposes, almost driven whale oil out of use, though the national light-houses are still supplied by the best whale oil, and we believe ships in many cases use it. Moreover, the oil of other fish is brought into use for various purposes, and olive and other vegetable oils are largely used for wool carding; and we may add that petroleum, vegetable, and other oils beside whale oil have been successfully used for lubricating machinery.

Still, whales are hunted and taken, and men employ courage and matchless perseverance in making the voyages of thirty and thirty-six and forty-two months, as they phrase it, with varying degrees of success. Fighting with a whale, in a boat, six or ten miles from the ship in mid-ocean "between sundown and dark," and the weather "getting squally," is no child's play. In former years we have seen at the head of their families in the church pews of those whaling towns, a half-dozen bronzed heroes of the sea, who had just "come in with a two thousand barrel catch" and after a voyage of perhaps forty months. Those strong faces would turn tenderly toward the proud and happy wife and the children, the youngest of whom looked up wonderingly at the strange face of papa, whom they were too young when he left to remember, and with moistened eye we have contemplated this picture, fit for the pencil or a poem. That voice, now tender and soothing toward the loved ones he has thought of for so many weary and hopeful months, has a grum and imperious tone when in the fierce struggles with the huge denizens of the deep, or striving with the stormy sea, and by any delay or disobedience of his fierce orders the success of their wild errand to icy oceans or their very existence is imperilled. How wide the range of human condition and disposition! So nature, also, has its contrasts, as when fierce winds provoked the ocean to hurl its mountain-waves upon a rocky coast as if the elements were in wild revolt, or two days after whispering a soft lullaby to its infant waves, as they are laid to rest along the peaceful shore, and the reflected sunset sky enwraps them in its crimson folds.

The *Nautical Gazette*, edited and published by B. S. Osbon, 83 South Street, New York, is devoted to the interests of Commerce and the Navy in all their phases. The editor is a practical seaman and can give all required information on such topics in detail, and we respectfully refer you to him.

PHRENOLOGICAL SOCIETIES.—Student. One of the best indications of the progress of phrenological doctrines is the formation of a society having in view the bringing together of those who are interested in the investigations of the mind, and in promoting the growth of friendly and co-operative relations among the disciples of Gall. In this country, with rare exceptions, local societies, formed for the purpose of promoting any particular

branch of science, appear to have but a lingering existence. Commencing, generally, with the exhibition of much spirit, and perhaps enthusiasm, on the part of a few organizers, in a short time there is a decadence of ardor, and finally a suspension of the whole undertaking. We can readily understand why societies formed among young men for the purpose of furthering each other's investigations in zoology or chemistry or entomology lose character for energy, and ultimately subside. We can not so readily understand why a society formed for the purpose of investigating the nature of mind, or promoting the intelligence of its members with reference to the attributes of human character, and for procuring such proofs and evidences as shall the more strongly affirm their views with regard to the relation of physiological or anatomical organization to disposition, should fade and fail. There is no higher study than that of the mind. It necessarily includes the examination of one's own personality. It has a great outreach; in fact, it describes humanity at large; it is correlated to everything that lives and breathes and possesses brain. Those who understand the subject of Phrenology must confess that its field of investigation is the most interesting which it is the province of man to consider. A Phrenological Society, properly conducted, affords to young men the best opportunities for mental development which any enterprise can offer. Unrestricted in the range of its discussions, and indefinitely suggestive of topics for consideration, it seems to us calculated to become one of the most popular modes for the instruction and normal entertainment of a community. In some parts of the West there have been formed societies of this sort, a few of which are still in operation. In Canada, we believe, there is one, while in England and Scotland there are two or three in a somewhat flourishing state. In a late number of the *JOURNAL* there was published a part of an address delivered before the Derby Phrenological Society by one of its members.

We are quite willing to furnish whatever instrumentalities may be within our control for the furtherance of any effort of this kind which may be made in this country. Wherever Phrenology seems to have taken a good hold upon the convictions of people, we think it would be greatly to their interest to organize a society; and if those who are interested in the preliminary steps should communicate with us, we would be glad to furnish hints on the best plans of organization. A student in the Chicago University, not long since, wrote us, stating that many of his fellow-students exhibited considerable interest in Phrenology, and it seemed to him highly probable that a Phrenological Society could be formed there. An institution of learning, especially one which has a voluminous student list, would make an admirable nucleus for the establishment of a scientific organization of this kind, from which would radiate influences tending to create other nuclei in

the shape of societies; and all working together as harmoniously as might be, would prove powerful motors in directing public sentiment and furthering practical thought.

INDECISION.—I am greatly troubled with "indecision of character." How can I best overcome this fault? My first impulses are quite strong, but I am afraid to follow them; and if I stop to question their wisdom, I am "all afloat," and it is only after a long and hard struggle that I am able to reach "shore" again. Will it be safe for me to follow my impulses (*even* in cases of expediency, where there is no question of morality or religious right)? or would it be better to strengthen my judgment by hard thinking? I am a professor of religion, but this uncertain, wavering mood makes me miserable.

Ans. Your Cautionness is probably too large for your Hope, Firmness, and Self-Esteem. In the absence of the facts as to your developments, we deem it safe to say, "try to be sure you are right, then go ahead."

ORGANIC VIBRATOR.—J. M.—We can not recommend this instrument, nor any instrumental treatment, as applicable to deafness generally, although some cases are benefited. Your case is probably an affection of the eustachian tube, and hygienic treatment, making electricity prominent, would seem to promise the best results.

ST. PAUL'S THORN IN THE FLESH.—What was Paul's thorn in the flesh? Was it a sore or disease? or was it in the form of a temptation? See 2 Cor. xii. 7.

Ans. This is one of the questions which has no demonstrable answer. It is to theology what the problem of squaring the circle is in mathematics—it is the *pons asinorum* on which the speculators stick. We think it was some mental affection. If it had been a club foot like that of Byron, which was the stinging worry of his life, or a hump back like that of Pope, which made him acrimonious, or any other bodily deformity, he could not have "besought the Lord thrice that it might depart from me." If Paul, living in the age of miracles, desired to have a miracle performed in his own behalf, by the removal of some bodily deformity, that would explain the nature of the thorn which so exceedingly agonized his sensitive nature. He calls it a "thorn in the flesh," hence we may infer that it was some appetite or bodily passion, some emotion that was chiefly related to the life in the flesh. Some men have excessive Approbativeness, and are mortified about a red face, big red hands, a nose not of a desirable form or size, cross eyes, a poor form, a diminutive presence, a cracked voice; not wrong or blameworthy in itself, but calculated to produce chagrin and wounded vanity. We refrain from mentioning the sources of mortification which afflict women. Let imagination fill the picture. On one side of Paul's nature he was heroic, even to martyrdom; on another side he was subject to all the disquietudes which afflict the weak and the sensitive. When he cried out, "O, wretched man

that I am! who shall deliver me from the body of this death?" it is by everybody understood to mean soul-trouble, not bodily ailment, yet he calls it "the body of this death." So he might have spoken of a "thorn in the flesh" in a metaphorical way. There needs to be no "thorn" literally, and no affliction of the "flesh" *per se*, to make one miserable. Let a man be afflicted with neuralgia or sciatica, with inflamed kidneys, with dyspepsia, or rheumatism, and he might call it a "thorn in the flesh." Or let a man with an active conscience and sensitive temperament suffer from remorse, from shame, from fear, or be goaded with appetite, with avarice, or with lust, and he may well cry out for Divine aid.

POP GOES THE SQUIRREL.—If I stand facing a tree, and there is a squirrel on the opposite side, and I go around the tree and the squirrel goes at the same time, keeping opposite, do I go around the squirrel or not?

Ans. The squirrel goes around the tree on a small circle, and you go around the squirrel and the tree on a larger circle, and it makes no difference whether the squirrel remains still or goes around the body of the tree. The mill horse goes around the mill, although the mill turns in the center of the great circle in which the horse travels. So the rim of the wagon wheel travels around the hub.

HARD-BOILED EGGS.—"Inquirer" asks if hard-boiled eggs are indigestible? Not entirely; but they are digested with difficulty. For once doctors agree, for on this subject the testimony of physicians and hygienists is unanimous. The most wholesome method of cooking eggs is to place them in hot water over the fire, and the moment the water begins to boil, remove them from the fire, letting them remain in the hot water three to five minutes.

OBJECTIONS TO PHRENOLOGY.—A physician of my acquaintance raises an objection to practical Phrenology on account of the frontal sinus. How shall I meet his criticism?

Ans. In the September number of the JOURNAL for 1870 this objection and many others are disposed of. We can send a copy for 30 cents.

STOMACH.—How many pints does the stomach of an adult person hold without overloading?

Ans. About three pints. By different habits of eating the stomach becomes enlarged or contracted. A horse fed solely on grass and hay will have a large stomach. If afterward fed on oats, or corn meal and but little hay, the stomach contracts to a comparatively small size. If a man eats largely of fruit, vegetables, bread, etc., his stomach becomes distended, so that it will hold quarts without being overloaded. If he eat meat and concentrated diet the stomach becomes contracted accordingly.

BONES.—How many bones does the human body contain? *Ans.* Two hundred.

CURE FOR A TOBACCO APPETITE WANTED.—Editor JOURNAL: Will you please inform a slave of tobacco how he may free himself? I am a young man, and have been using tobacco more or less since I was ten years old, and am convinced of its ill effects upon the human system. Nevertheless, I am a slave to the weed, and have tried to free myself time after time, but never could succeed. Doubtless there are hundreds of your readers in the same "fix." Please give us a cure through your JOURNAL, and oblige.

One way to free a slave is to abolish slavery. Each tobacco slave has it in his own power to emancipate himself. An intelligent, strong-willed, manly man will not long remain a slave to another man. Why should he remain a slave to the use of tobacco? It is not manly to be a slave—it is degrading! But he who can not or will not master his appetite, will be mastered by it. It is a humiliating fact that large numbers of persons who occupy respectable positions in society are in the same boat with our correspondent, and would give thousands to be free from this bondage. But, alas! they are weak. They *think* it would be such a struggle to quit, and they have neither courage nor grace to fight the devil within. They are slaves! The way to conquer is to quit.

CULTURE OF VOICE.—Will you tell me how to cultivate a full, deep orotund tone of voice? I have a fault of speaking on too high a key, and my voice is not naturally deep, though I am able to speak on a very low key. I am sometimes troubled with shortness of breath or a difficulty to draw a long breath. I am otherwise in perfect health, and am very confident my lungs are sound. I fear, however, that the culture of voice has something to do with my breathing.

"STUDENT."

Ans. Practice in public speaking or reading aloud to friends thirty to sixty feet away, will give strength and depth to the voice. Shortness of breath sometimes comes from tight lacing in women, or from the use of tobacco, coffee, and spices in other persons. Lessons in elocution would put you on the right track for improvement in this respect. Singing, under proper training, is also a good mode of voice culture. Read "Oratory, Sacred and Secular," for instruction.

What They Say.

AN ORGAN FOR TEMPERATURE.—[We have a claimant for the vacant spot indicated by a star, just forward and above Alimentiveness, on the symbolical head.]

ED. PHREN. JOURNAL.—An organ for temperature, to me, seems as indispensable as an organ for aliment—the two faculties seem closely related, and are generally manifested together; for we naturally choose that food which is best adapted to the maintenance of a proper temperature of body. We learn the temperature of anything in the same way that we learn its individuality,

Form, Size, or Weight, etc., viz., by perception or sensation; which being the case, why not look for the "Organ of Temperature" as joining the perceptive group, and also as joining Alimentiveness, since the sense of nutriment and of temperature are so closely related? Persons with this organ large are in misery when either too warm or too cold, while those with it small take little notice of their temperature—at least my few observations tend to confirm this. F.

THE EDITOR'S WASTE BASKET.—One of our contributors to the PHRENOLOGICAL JOURNAL, in a letter inclosing an article for the editor's examination, makes the following spirited and poetic allusion to our "waste basket." The verses are worth preservation:

A nice little basket sitting under your table,
A grave for bright hopes and dark fears—
As deep as the ocean, as cold as its bosom—
Hiding heart-pangs and longings and tears.
And sense that is shipwrecked, and words that are wasted
In its cavernous darkness and gloom,
Find silence forever, without resurrection,
In the editor's basket—their tomb.

Alas! I remember that terrible basket,
Its depths are unfathomed, unknown;
There fancies lie fading, like leaves in December,
Budding life-dreams forever unblown.
An editor's welcome! Ah, keep me and save me
From seeing his frown or his sneer;
'Tis enough that my brain-child, my lov'd and my last one,
Was buried unblest by a tear.

PHRENOLOGY AND EDUCATION.—The President of Eminence College, Kentucky, whose remarks in relation to "Mixed Schools" we publish in the present number, writes us as follows:

"For twenty years we have been studying human nature with a view to ascertain the normal method of education, and for the same period endeavoring to find a practical solution of the 'educational problem.' As the most enlightened observers and the clearest thinkers concede we are 'on the right track,' soon a rational solution of the question may be expected. When our systems of culture are adjusted to the physiological, phrenological, and psychological nature of man, then, and not till then, will we have a system of education adapted to that complex and wondrous being, man; and until this is done we need not expect to witness the physical, mental, and moral regeneration of the world. The schoolmasters of the past have been 'blind leaders of the blind,' stupidly ignorant of human nature, and utterly unwise in their methods for its development. Phrenology, of all the mental sciences, alone has furnished anything like a correct analysis of the organs, a consistent nomenclature of the faculties of the mind. The phrenologist as well as the schoolmaster is abroad in the land, and soon we may expect a more harmonious adaptation of the scheme of education to the idiosyncrasies of the rising generation." * * *

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

VOL. LV.—No. 4.]

October, 1872.

[WHOLE No. 405.



DR. LOWELL MASON.

THE recent death of this eminent gentleman has sent a thrill of regret through the whole musical world; and especially is it felt among those who have given attention to sacred or church music, in which

department Dr. Mason achieved his brightest laurels. Over ten years ago a personal examination was made of him by one of the members of our New York house, the accuracy of which is a sufficient warrant

for our introduction of an abstract of it in this place.

The vital and mental temperaments predominated in his organization, conferring much constitutional vigor, and imparting that depth of emotion, warmth of feeling, clearness of perception, and general activity of mind for which he was known. He had not only a clear and correct perception of the quality and condition of things, but also such strong analytical and logical power that his mind could rise upon the facts which he collected and survey wide-reaching fields of thought. He improved upon his own thoughts as well as upon the thoughts of other people. Whatever of truth he found floating, which he could apply in his own lines of thought and action, he made, as it were, his own, forged it into the form and semblance of his own creation. He could bring together ideas and principles, facts and illustrations, from diverse sources, and cause them to minister to the furtherance of his ideas.

Firmness was a distinguishing quality of his disposition, and also large Conscientiousness, which rendered him just and upright. He was prudent and cautious, but there was a very strong development of the element of courage, which gave him physical stamina and also moral strength. He was not afraid to risk something, especially when he could engage in accomplishing the work himself.

He had an abundance of vital magnetism, could influence others; readily produced an impression upon an audience or a class, rendering them sympathetic and even subservient. This is one of the secrets of his success as a teacher. He was thoroughly in earnest in whatever he undertook. His large Hope inspired him with a fervent sense of success; gave him such confidence that he pressed forward in his efforts, inspiring all those who were associated with him with the same sanguine trust in the attainment of their object.

LOWELL MASON was born in Medfield, Mass., January 8th, 1792. He early manifested a great love for music, and sang, and played on various instruments, almost instinctively. In early youth he commenced teaching, for which, also, he manifested a strong inclination. At the age of twenty he removed to Savannah, Ga., where, although engaged in other occupations, the teaching of music and the conducting of choirs and musical associations, both vocal and instrumental, were leading objects of his attention. During his residence of nearly twenty years in Savannah, he became deeply interested in Sabbath-school teaching, and was for many years the superintendent of a large school, the only one at that time in the city, and in which all denominations united. It was while engaged in this school that he formed those habits of intercourse with children which afterward proved so valuable when teaching became the daily occupation of his life, in the wide sphere of musical instruction in public schools.

In 1821 the Boston Handel and Haydn Collection of Church Music, of which Mr. Mason was the sole editor, was first published, and in 1827 he took up his residence in Boston. He now commenced an extensive system of teaching of vocal music in classes, introducing at once that feature in musical teaching which had been but little known before, but which he had successfully pursued in Savannah, the instruction of children; training their voices especially to the performance of the alto part in choral music. These efforts were highly successful; they resulted in the awakening of a very general interest in musical instruction, and in preparing the way for the formation of the Boston Academy of Music, and for the introduction of music into schools as an educational study.

Mr. Mason had been thus engaged for sixteen or eighteen years, when an event occurred which not only changed his whole manner of teaching, but which led him to a much wider and more comprehensive view of the subject of musical instruction than he had before entertained, and to juster conceptions of the whole theory of education, as resting on a rational and philosophical basis. We refer to the fact that he had now become acquainted, for the first time, with the princi-

ples of instruction as developed by Pestalozzi, which, although at first with great reluctance, he at length thoroughly embraced, and afterward constantly adhered to and successfully illustrated.

For this clearer light on the subject of education, Mr. Mason was indebted to the late William C. Woodbridge, extensively known, not only as a geographer, but as an educator, who, while in Germany and Switzerland, became acquainted with the best methods of instruction, and witnessed the excellent influence of music on the pupils of Pestalozzian schools. Becoming thoroughly convinced of its importance as a school exercise and an educational influence, he procured all the information in his power respecting it, and obtained the most approved text-books of school or class voice-exercises and songs, as well as of elementary treatises on musical instruction. The books by Nägeli and others, which had been prepared with particular reference to the legitimate influence of song in moral culture and the training of the affections, Mr. Woodbridge not only placed in the hands of Mr. Mason, but was at the trouble himself to translate them, in part, and to furnish such explanations and directions as he had received personally from their authors.

To those who know, from their own experience, how difficult it is for one who has for many years been successful as a teacher, and has therefore great confidence in some method of his own, to substitute for it that of another, it will not seem surprising that it was at first no easy thing to convince Mr. Mason that the new method was preferable to that of rules, signs, tables, and definitions, to be committed to memory from a book to which he had been so long accustomed, and in the use of which he had attained to such success. But the efforts of Mr. Woodbridge were persevered in with such constancy and good humor, that Mr. Mason at last consented to a proposed experiment of teaching a class after the Pestalozzian manner, provided one could be found for the special purpose. Mr. Woodbridge and others who had become interested in the subject, formed a large class of about two hundred ladies and gentlemen, with the express view of bringing the new method to the test of experience. The les-

sons were carefully prepared, at first with the assistance of Mr. Woodbridge, and were given by Mr. Mason with a success vastly greater than had ever before attended any of his efforts. He was fully convinced of the practicability and the fitness of the new method, and he soon began to apply it to juvenile classes, and with a success corresponding to that in the adult class referred to above.

In 1830 a lecture was given by Mr. Woodbridge, before the American Institute of Instruction, on "Vocal Music as a Branch of Education," in the State House in Boston. Illustrations were given by a class of Mr. Mason's pupils. A wider and more important field of instruction was now opened than had before been contemplated. Mr. Mason's juvenile classes—which had already been taught gratuitously for several years, he furnishing not only the tuition, but also the room, fuel, and all needful school apparatus—now rapidly increased in numbers to such extent that thousands of children, of both sexes, received more or less instruction in singing and in the knowledge of music.

Mr. Mason was soon joined in these labors by Mr. George James Webb; and here it is proper to observe, that the whole amount received, as the proceeds of the juvenile concerts, was given to some charity, neither of the instructors receiving any pecuniary compensation for his labors, until after the formation of the Boston Academy of Music, which, in part, at least, grew out of these efforts.

The subject of music in schools was now taken up in good earnest by some of the best educators and teachers of Boston, and instruction in singing was introduced, almost simultaneously, into several of the schools. It would not be consistent with our present purpose to follow the progress and wider diffusion of musical instruction and its genial influences, either on the character of education or on the improving and extending taste for music in the community at large. We can merely glance at the auspicious establishment of the Boston Academy of Music, and the subsequent introduction of music as a regular branch of instruction in the public schools of Boston, whence it rapidly extended throughout New England and the Union.

Under the patronage of the Boston Academy of Music, and under the immediate direction of Messrs. Mason and Webb, various measures were taken for the improvement of musical education, by the formation of permanent classes, the association of church choirs, the establishment of lectures, the periodical appointment of concerts, schools for instrumental music, and the yet more extensive introduction of vocal music in public and private schools.

We must not omit, in this connection, to state the fact that one of the very first regular Teachers' Institutes ever held in our country, was that held in Boston, in August, 1834, by the Academy, for "instruction in the methods of teaching music." In this class, which was annually continued up to the year 1852, the Pestalozzian method of teaching vocal music in classes was regularly explained and illustrated. Similar classes for teachers were soon established in various places, and it is, perhaps, owing to this fact that Pestalozzian teaching came to be very extensively, though erroneously, regarded as merely a method of *musical* instruction rather than one of universal application in all branches of study at all stages of their progress.

In 1837 Mr. Mason visited Europe for the principal purpose of making himself personally acquainted with the best systems of teaching music in actual use abroad. In Paris he found Wilhelm's method in use; but this being based entirely on those principles which Mr. Mason had some years before abandoned, could lay no claim to his attention. In Wurtemberg and the northern parts of Switzerland he became acquainted with Kübler, Gersbach, Fellenberg, and others; Pestalozzi and Nägeli were no more. The three first-named pursued, to a greater or less extent, the inductive method, and he became more familiar with its practical application to music and to school studies generally.

The suggestive views of Pestalozzi Mr. Mason has carried farther, perhaps, than any other teacher has ever done, and these views were brought to the thorough test of daily experience in his teaching, in one of the public schools of Boston, previous to their general introduction, under his personal direction in these schools, and in the classes of

the Academy. Another sphere in which the benefits resulting from Mr. Mason's application of Pestalozzian principles to the processes of instruction have been made conspicuous, is that of the Massachusetts Teachers' Institutes, which he attended, as lecturer and instructor in music, from the commencement, under the direction of the Hon. Horace Mann, the first Secretary of the Massachusetts Board of Education, through the secretaryship, also, of the Rev. Dr. Sears and of the Hon. George S. Boutwell. In this form of teaching Mr. Mason peculiarly excelled. His long-continued experience as a practical teacher, his rare tact in developing the vital principles of instruction in the simplest and happiest manner, his endless variety of illustrations, his indefatigable perseverance in tracking and exposing errors in thought or in theory, his genial and humane humor, his playful sallies of wit, his kindly sympathy with youth and childhood, his gentle yet impressive monitory hints, and occasional grave reflections, gave him an indescribable power over his audience.

The remark was very justly made by Horace Mann, that it was well worth any young teacher's while to walk ten miles to hear a lecture of Mr. Mason's; for in it he would hear a most instructive exposition of the true principles of all teaching, as well as that of instruction in music.

In 1855 the University of New York recognized the value of Mr. Mason's labors in his more immediate professional sphere, by conferring on him the honorary degree of Doctor in Music—the first instance of such a degree being conferred by an American university, and Mr. Mason being the first American who had received such an honor.

Dr. Mason's influence, through his published works, consisting of over fifty musical works, including the "Handel and Haydn Society's Collection," the "Boston Academy's Collection," and the "Carmina Sacra"—the latter having had a sale of over four hundred thousand copies—not less than his personal instructions, has been in the highest degree conducive to the cultivation of *purity of taste*, as an important element not only in the esthetic relations of musical art, but in all those of high moral culture and true elevation of character. The judgment and

care with which, in this relation, his selection of school songs have been compiled, are beyond praise. To feel the full value of his labors in this department, we have but to glance for a moment at the low and degrading character of too many of our popular, and even our school songs. The noble office and mission of music, as an intended refiner and purifier of the heart, Dr. Mason never overlooked. Well did he say:

"We fear that it is too often the case that music in school is regarded not as having

anything to do with study, but as a mere recreation or amusement. Valuable as it may be, even in this view, we feel certain that, when introduced into schools, music should be made a study, not only in itself considered, but as a correlative to all school pursuits and occupations. Unless the pupils are made more cheerful, happy, kind, and studious, by the music lesson, it is not properly given; for these are some of the results which music was obviously designed to secure."

Department of Religion and Psychology.

Know,
Without or star, or angel, for their guide,
Who worship God shall find him.—*Young's Night Thoughts.*
The soul, the mother of deep fears, of high hopes infinite;
Of glorious dreams, mysterious tears, of sleepless inner sight.—*Mrs. Hemans.*

"AM I MY BROTHER'S KEEPER?"

"The voice of thy brother's blood crieth unto me from the ground."—Gen. iv. 9, 10.

WE have an epidemic of destructiveness; murders at noon of day and mid of night are so frequent that they have almost lost their horror. We have become so familiar with sudden death—the assassin's blow, the suicide's desperate despair, murderous mine and railway disasters—that when some new horror greets us in the news column we scarcely feel a shock. Surely it is high time that we gave sober thought to means of curing crime, and not only this, but to finding out its cause and preventing it. Surface measures have been tried long enough. Retributive justice has never yet had any perceptible effect in the prevention of crime. Though many murderers escape the extreme penalty of the law, executions are frequent enough to strike evil-doers with terror if evil-doers were to be frightened in that way. But neither the terrors of the human nor yet of the Divine law have any effect in staying the scourge of unnatural death which sweeps like a pestilence over the country. Where does the responsibility lie? And here our text comes in. There is more contained in it than we at first perceive—more perhaps than some will be willing to accept.

1st. We are our brother's keeper. As such we are responsible for the helps and hindrances to a true life with which we surround him; responsible for the wrongs done and the temptations and necessities we impose upon him.

2d. The blood of every innocent victim, and every victim of the social and civil fabric of which we form a part has a voice that cries from the ground to the great I AM for compensation, and never cries in vain, for it reaches the ear of the Almighty, who will see to it that justice is done.

3d. God did not hang, shoot, kill, or break the first murderer, but sent him out to bear the burden of his guilt alone; nor is it recorded that Cain repeated the offense. On the contrary, he took a wife, became the head of a family, and was doubtless a respectable man for the period in which he lived.

Let us not forget that the sentiment of this scripture is very ancient; and if we analyze it we may find a meaning, a significance, not heretofore recognized. The blood has a voice and cries from the ground. The blood is the life. It not only contains heat but the principle of life which underlies and supports human existence. If there be any

truth in the doctrine of immortality, this blood has in it the essence of that which enters into immortality, even though a spirit risen may not have "flesh and bones." The destruction of human life, therefore—the cutting short of existence on the earth—the abrupt infraction of a great law and wise purpose for any cause is a sin against the wisdom and justice of the Infinite.

To be more explicit in our application of this old scripture, we are well aware that certain vapors and gases, when inhaled, stimulate human passions and peculiarities, the same agent producing different effects on different individuals. We know also that certain solids and fluids operate in the same way in destroying mental equilibrium and moral responsibility, as tobacco, alcohol, opium, hasheesh, etc. Whole herds of cattle are made frantic with the taint of blood upon the air and gore each other furiously; men who are slaughterers of animals are said to grow reckless of life. Miasma and the virus of plagues are carried in the atmosphere; decaying vegetable matter and animal offal throw off spores which produce physical distempers. Human blood has its own peculiar poison in decay; the surgeon inoculated with it dies a most horrible death; shed in quantities, as upon the battle-field, may it not have its own subtle influence in poisoning the air and arousing and stimulating the baser passions of men? May not this voice have been crying from the ground and bringing upon our country the evils of murder and suicide from which we suffer? Not even a sparrow falls unheeded by the eye of Eternal Justice. In war we slaughter millions; in peace we shoot and hang hundreds. Nearly all of these, our victims, are innocent of any crime. They fall in the interests—to further the ambition or to gratify the cupidity—of self-appointed masters. Many of those we hang are the victims of bad organization, bad education, and a very bad state of society; and therefore in one sense, innocent or irresponsible. All this blood has a voice that cries continually. The life principle rising spontaneously from the earth, reeking with gore, goes up, up, and abroad, everywhere demanding justice, appealing to the Infinite. We drink it in, inhale it with every breath, and have reflected back upon ourselves the

conditions which fulfill the prediction and the curse that "whoso sheddeth man's blood, by man shall his blood be shed." It is the divinely appointed law of compensation, making the offense its own ultimate punishment; it reflects upon us the results of mental and moral states. Society, in its present form, is the expression of selfishness, force, injustice, destructiveness. Hence we have theft, murder, suicides, executions in one continual round; and so we will have until we cease to rely on punishment as the cure of evil, and find some better way which shall destroy the cause of crime. s.

PERSONAL INFLUENCE.

MAN'S stay is short upon the earth. Generations swiftly come and go. Each succeeding one inquires not nor cares much where lies the dust of preceding ones; yet each enjoys the labor of the departed. We perhaps feel not the joys or the sorrows of those who have blessed the earth with their love or cursed it with their hate, yet it is true, nevertheless, that their deeds of good and evil live after them, and all around us are the monuments they have left.

The dead lie where the hands of the living have laid them, yet they are with us still. We can not free ourselves from their presence. We walk in the paths they trod, we sit in the seats they filled, we live in the houses they built, and enjoy the fruit of their hands.

"—all chambers of life are hung
With tapestry wrought by dead fingers.

We walk in the midst of the bygone years,
Mid the ghosts of the dead generations;
Earth is sweet with their songs and salt with
their tears,
And rich with their soul's libations."

We feel the presence of the great and the good even though generations and centuries have passed away. We turn back the wheel of time and search the musty records of the past, and these unfold to us the names and the deeds of those whose tombs are somewhere in the wide domain of whose dust they were formed, but that *somewhere* who will tell? The leaves of the dead past record their deeds—the monuments their hands have built perpetuate their names. Aye, and there both name and deeds will stand till the stream of Time has poured the last drop of its waters into the ocean of eternity.

But not only the good live thus. Mingled with the works of the lovers of the true and the good are those also who have lived to their own dishonor and the injury of the race. If there were an Abel, there was also a Cain; if there were a good king over Israel, there was also a wicked one; if there were a true prophet, there was also a false one; if there were a Trajan and a Marcus Aurelius, there were also a Nero and a Commodus. If they lived in the past, they will live in the future. Their influence on religion, laws, and morals will be felt as long as the world has need of religion, laws, and morals. And if they of the past affect the present, so will we affect the future. What, then, shall be the character of our influence? Shall we all, recognizing our manhood and womanhood, do it honor by living noble lives? such lives as will give us a worthy place among the benefactors and lovers of humanity?—lives that will leave our impress on the hearts of our friends and our fellows that will be felt for good in eternity? Or shall we be a sore and a blot upon the society of our age? Or shall we be passive instruments in the hands of others to mold us at their will? Of all poor, pitiable creatures, he who has no positive power is the lowest. I would rather not live than be a passive or a *neutral* man. And yet to be a man, to live, is the highest and most glorious privilege. To be a man is a higher privilege than to be an angel. They, angels, are servants and

messengers; we, men, have the privilege of being *sons* of God and *brothers* of Him whose "name is higher than any name." A popular author makes one of his important characters say, "I would rather be a *guilty man* than the grandest inanimate object in creation." We admire and applaud the thought, but we would insist on having a positive character. There is no place that we can conceive for the neutral man in the economy of God's universe save to be run down and trodden under the feet of other men.

Young man and young woman, do you wish to live for good only? do you wish to hang beautiful "tapestry" for the children of the after generation? Do you wish the earth to be "sweet with your songs" or "rich with your soul's libation?" The path of honor is the path of duty, and the path of duty is the road to success.

There is much written and sung about the beauty of the physical world, but the highest physical beauty is the beauty in the face and form of man, the *homo*, and its highest type is that of *woman*.—

"The fairest of creation; last and best
Of all God's work; creature in whom excels
Whatever can to sight or thought be formed;
Holy, divine, good, amiable, or sweet."

But there is something more beautiful still—the beauty of moral character. Such beauty partakes of the Divine nature, and God is the embodiment of all beauty. J. R. GAFF.

THE ONE-EYED CONDUCTOR.

[We have received from a valued correspondent the following candid article, and also the "offered explanation," both having been recently published in the *Bradford Argus*, at Towanda, Pa. We are asked for our opinion of the event.]

A VERY strange incident happened to me once, a good many years ago—so strange that I have many times thought I should like to write it down, to see if anybody could give me a satisfactory explanation of it. My husband, however, until lately, has been averse to my doing so; but last Christmas eve, when there were a number of us together at grandfather Lorrimer's, singing songs, telling stories, and so on, I told my story, and created such a sensation—so many questions were asked, so many theories were broached, and everybody, in fact, seemed to be so much interested—that Joseph, my husband, came to the conclusion that it was a better story than he had before thought it; and a day or two afterward he

said to me if I still had a mind to print that little adventure of mine, he would not object to my doing so.

On account of the reason I gave above, I was glad to do so. I hope this article may attract the notice of some one who can give me a rational solution of an event that has perplexed me for years. Such an explanation would be a great relief to my mind, and I shall be glad to hear from any responsible persons on the subject. My address is, "Mrs. Joseph Lorrimer, Harrisburg, Pa."

My acquaintance with the hero of this story arose during my bridal tour. My parents were, and still are, Philadelphians; but Joseph's people live in Harrisburg, and he himself is overseer in the Crosby Iron Works, just outside of that city.

Our wedding was a very quiet one. There was no money to spare on either side, and,

after a family breakfast, we went directly to the cars and started for our future home. I was a young thing then—just eighteen—and my dear Joe was only three years my senior; two shy, happy, foolish children we were, it seems to me now, as I look back upon that day so many years ago. The very trip—from Philadelphia to Harrisburg—commonplace as most people would think it, was a wonderful event to me, who had never taken longer than an hour's ride on the cars before in my life.

I viewed, with eager, interested eyes, the country through which we passed, and all that was going on around me; the passengers, the car itself, with its fixtures, the conductor and the brakemen were all objects whose novelty gave me thoughts, in those days, that were very apt to evince themselves in eager, unrestrained chatter.

We thought we were conducting ourselves with all possible ease and dignity; yet I do suppose now there was not an individual who looked at us that did not guess at a glance our recently assumed relationship. I am sure that the conductor did. He was a fine, portly-looking man, with genial, brown whiskered face and bushy hair; he would have been a really handsome man had it not been for the loss of one eye; it had been lost by disease—the exterior of the eye, save that it was sunken and expressionless, retaining its original appearance. The remaining eye was bright and blue, as jolly and sparkling as the rest of his pleasant, good-humored face.

As he came to collect our fare Joe handed him a bill.

"For yourself and wife, I suppose, sir?" he asked with a smile.

Joe turned very red, and bowed a dignified assent. As for me—I confess it—I turned my head and tittered. Very ridiculous, was it not?

The car had not been near full when we started, but people dropped in at the various way-stations, so that by the time we reached Lancaster nearly every seat was taken. We, at starting, had taken two seats, turning one to face us, upon which our various hand baggage was placed. At Lancaster the cars stopped some time for dinner; and just as they were about to start again, our conductor entered the car, ushering in an old lady in Quaker garb, beneath whose deep bonnet was visible a kind, plump, rosy face with bright spectacled eyes.

She glanced around on either side as she advanced up the aisle in search of a seat, and, in obedience to a nudge from me, Joe rose,

and beckoning to the conductor, said: "There is a seat for the lady here."

Smilingly the old lady approached. I commenced gathering up the shawls and packages that lay upon the vacant seat, that it might be turned to its proper position, but the old lady checked me.

"Don't trouble yourself, friend; I can sit just as well with the seat as it is;" and without further ceremony she ensconced herself opposite me, while the one-eyed conductor deposited a large covered band-box at her feet, and paid her so many little attentions, at the same time addressing her in so familiar and affectionate a manner, that I saw at once she was no stranger to him.

A glance at the kind old face opposite soon told me they were mother and son, for the two faces were wonderfully alike, especially in the open, cheerful expression. My heart was drawn toward her at once, and, as the conductor moved on, I could not resist making some overtures toward acquaintance by asking if she was quite comfortable.

"Quite so, thank thee," she answered at once; "but I am afraid I have discommoded thee somewhat."

"Not at all," I assured her, and the ice once broken, we chatted together very freely and pleasantly.

As I had surmised, the conductor was her son, and very proud and fond of him the old lady was. She told us many tales about his wonderful goodness, his kind-heartedness, and unselfishness, and when, after we had left the next station, the conductor approached us, we really felt as if we were already acquainted with him, and were disposed to be as friendly with him as with his mother.

He stopped to exchange a few words with her, and, as she was talking with us, we very naturally all fell into conversation together. He proved to be an intelligent man, who had seen a great deal of life, particularly on railroads, so his conversation, to me at least, was very entertaining. Among other interesting things he explained to us the signs and signals used by railroad officials upon the road. One of these signals—the only one I need mention here—he said was as follows:

When a person, standing in the road or front of or by the side of the car, throws both hands rapidly forward, as if motioning for the cars to go backward, he means to give information that there is "danger ahead." "When you see that signal given, madam," said our conductor, "if the cars don't obey it by backing,

do you prepare yourself for a flying leap, for the chances are that you will have to practice it before long."

He spoke lightly, but noticing that the ideas suggested were not very pleasant ones to me, he changed the subject, and I soon forgot the little feeling of discomfort his words had occasioned. The old lady did not travel with us far. She stopped at a way-station some twenty-five miles west of Lancaster, where she informed us she had a daughter living. Her own home, she had already told us, was in Lancaster, where she lived with a married daughter who kept a boarding-house. She gave us one of her daughter's cards, and Joseph promised if he ever had occasion to visit Lancaster he would try and find her out.

With mutual kind wishes and cheerful adieux we parted. The old lady was helped out of the train by her son, and we saw her a moment later upon the arm of another gentleman, whom we supposed to be her son-in-law, walking briskly up a little hill that led from the station to the heart of the village. Our own journey came to a conclusion in due time, and the last I saw of the one-eyed conductor was when he stood on the platform of the cars helping us out with our baggage, which he had carried for us from where we had been sitting.

It is not my purpose to detain the reader with any details of my private history further than is necessary to give a just comprehension of what is to follow. Two years had elapsed before I was called upon to take the second journey, to the events of which what I have already narrated forms a necessary prelude. This time I journeyed alone from Harrisburg to Philadelphia, upon a visit to my parents, whom I had not seen since my marriage. I had been having a good deal of trouble. I was ill for some time after my baby's birth, and before I had fully regained my strength my little boy was taken ill. He had the whooping-cough, and after I had nursed him through it the whole summer, he took a cold in the fall that brought it back upon him and finally killed him. I was so weak and miserable myself that I could not struggle with my grief as I should have done; I pined and moped and wasted away until the doctor said that if I did not have a change of scene, or something, that he would not answer for my life.

I did not want to leave home and the dear remains of my lost baby; above all, I did not want to leave my husband, for, in my foolish despondency, I felt a foolish dread that he was to be taken from me. It was impossible, just

now, for him to leave his business to go home with me; they were executing a heavy order at the foundry, which kept all hands working almost night and day. He promised that he would join me as soon as he could; but after what the doctor had said, he would not hear of my departure being delayed a minute longer than could not be avoided; so he wrote to my father that I would be in Philadelphia on a certain day, in order that he might meet me at the depot; and having put me in the cars at Harrisburg, and seeing me safely started on my journey, he knew that there was very little doubt but that I should reach Philadelphia after a comfortable, uninterrupted half day's ride.

Ah! how different was the trip from the one I had taken two years before! How different was I—the wan-faced, hollow-eyed invalid, in my mourning-ropes—from the shy, blooming girl, in her bridal array, who found so much to amuse and interest her in that brief journey! Nothing interested me now, nothing amused me, all was wearisome and monotonous. I leaned from the car window as long as I could to catch the last glimpse of poor Joe, who, "with a smile on his face, and a tear in his eye," stood upon the platform waving his hat to me as we moved away.

After that I sank back in my seat, too sad and despondent even to cry, and lay there as we sped along, thinking of nothing, caring for nothing but the memories from which I was trying to escape. I did rouse up a little as the conductor approached to collect my fare—the remembrance of the one-eyed man and his nice little mother recurred to me the first time for many months. This conductor, however, was not my old acquaintance, being a sallow, dark-eyed, cross-looking man, as different as possible from the other one. I felt a little disappointed at first, but after he left me I leaned my head back again and thought no more about the matter.

After a while I fell into a dose, which lasted until the call of "Lancaster—twenty minutes for dinner!" ringing through the cars aroused me, and informed me that we were just entering the city. I sat up then, sleepily and languidly. It was a warm day in early October, and the window of the car was lowered; I leaned my elbow upon the sash, and looked out upon the scene before me. As I was thus gazing, drowsy and indifferent, neither caring nor thinking much about what I saw, I noticed a man upon the roadside, a little in front of the car in which I sat, gesticulating violently with his hands and arms.

The next minute I was sitting bolt upright in my seat, my heart leaping almost into my mouth with sudden fright, for in the gestures that were being made I recognized the signal which, two years before, the one-eyed conductor had told me meant "danger ahead." The cars were not moving very rapidly, and during the moment that we were passing by the man who had given the signal, I had a full view of him—his face being turned toward the cars, and his eyes meeting mine so directly that I could have spoken to him had I chosen. I recognized him at once—it was the one-eyed conductor; and seeing that I was now more scared than ever, being now quite confirmed in my belief that an accident was now impending; for I knew that he must occupy some responsible position upon the road, and could, therefore, have made no mistake in the matter.

No one else, however, either inside or outside of the car seemed to partake of my alarm. The cars were slackening their speed, but that was because we were approaching a station, and I had not intended getting out of the cars until I had reached the end of my journey, but had been so startled by what I had seen that I could not sit quietly in my seat.

I got out with the rest of the passengers, but did not follow them to the hotel. I stood upon the platform gazing up and down the track uneasily, but could see nothing at all that could awaken apprehension. The one-eyed conductor was nowhere to be seen, though I watched the road, in the direction where we had passed him, for some time, expecting every moment to see him come in sight. A porter, trundling a wheelbarrow, passed me, and of him I ventured to inquire:

"Is there anything the matter with the engine or with the track?"

"Not as I know on," he answered gruffly, and passed on.

I was still terribly uneasy; I was certain that I had not been mistaken in the man or the signal; the latter, especially, I remembered—a forward motion with both hands, as if directing the cars to back. I could recall distinctly the face and gestures of the conductor who had explained it to me, and also his words, "If ever you see that signal given prepare for a flying leap, for the probabilities are you will soon have to take it;" and the longer I dwelt upon what I had witnessed the more convinced did I become that the signal had not been given carelessly.

I went into a waiting room to sit down until I could determine what it would be best for me

to do. I felt a most invincible repugnance to returning to the cars and continuing my journey; the excitement and worry had made me sick and faint, and I felt that I ran a great risk of becoming ill before I reached my journey's end, even if there was no other danger to be dreaded. What if I should stay over at Lancaster until the next day, and telegraph to father to come to me there? And at the same instant I remembered that there was in my traveling satchel, in the little outer-pocket, where it had rested undisturbed for two years, the card which the old Quaker lady had given me, bearing the name and address of her daughter, who kept a boarding-house. That remembrance decided me; if I could find lodging at that place I would remain over-night at Lancaster.

Summoning a driver to me I showed him the card, and asked him if he knew the address.

"Certainly, mum," he said promptly; "take you there in ten minutes; Mrs. Elwood's boarding-house; quiet place, but excellent accommodations.

Thus assured, I entered his carriage, and he fulfilled his promise by setting me down after a short drive in front of an unassuming, two-story frame house, whose quiet, elderly appearance made it look unlike a boarding-house. A boarding-house it proved to be, however, and in the landlady, Mrs. Elwood—who came to me after I had waited a while in the darkened parlor—I traced at once so strong a resemblance to my old Quaker friend, as convinced me I had found the place I sought.

As she was leading me up stairs to my room, I ventured to state that I had met her mother two years before, and had formed a traveling acquaintance. Mrs. Elwood's pleasant smile upon hearing this encouraged me to ask if her mother was living with her, adding that I should be pleased to renew the acquaintance if she was. The reply was in the affirmative.

"You will meet her at dinner, which is served at two, and she will be glad enough to have a chat with you, I'll venture to say."

I wrote out my telegram to father, and Mrs. Elwood promised to have it attended to at once for me; after doing everything that kindness could suggest, she left me to the rest I was beginning very much to feel the need of. A tidy-looking little maid came to me when the dinner bell rang to show me the way to the dining room; and there the first person I saw was my little old lady, already seated near the upper end of a long table.

She bowed and smiled when she saw me, but

we were too far apart to engage in any conversation. After the meal was over she joined me, shook hands very cordially, and invited me to come and sit with her in her room. I was glad to accept the invitation, for in my loneliness the kind face of this chance acquaintance seemed almost like that of a friend; and soon in one of the easiest low-cushioned chairs in one of the choicest of old lady apartments I was seated, talking more cheerfully and unreservedly than I had talked since my baby died.

I expressed some surprise she had recognized me so promptly, to which she replied:

"I had always a good memory for faces, though names I am apt to forget; when my daughter spoke to me about thee, I could not at all call thee to mind, yet as soon as thee entered the dining-room, I remembered thee."

"And yet I do not look much like I did two years ago," I said, sadly.

"That is true, my dear, thee has altered very much. I almost wonder now that I should have recognized thee so promptly. Thee has seen trouble, I fear," she added, gently touching my black dress.

"Yes," I said, "I have had both sickness and death to battle with; I neither look nor feel much like the thoughtless happy bride whom you met two years ago."

"Is it thy husband who has been taken from thee?"

"Oh, no! no!" I cried, the ready tears rising to my eyes; "I don't think I could have lived if I had lost him. It was my baby that died—that was hard enough; the dearest little blue-eyed darling you ever saw—just ten months old."

My old friend's face betrayed her sympathy, as she sat silently waiting for me to regain my composure. After a little she said, sighing:

"It is hard to lose a child, whether young or old. I can fully sympathize with thee in thy bereavement, for I, too, have lost a son since I last saw thee, though I wear no outer garb as a badge of my bereavement."

I looked at her, a little surprise mingling with the sympathy I tried to express.

"I thought I remembered your telling me you had but one son?"

"That was all," she said, sorrowfully. "God never gave me but one, and him He has taken away."

I stared at her now in undisguised astonishment.

"Was not that gentleman—surely, madam, I was not mistaken in thinking the conductor—the gentleman who brought you into the

cars when we met two years ago—was your son?"

"You are right, he was the son of whom I have spoken."

"The one-eyed man!" I gasped, forgetting delicacy in astonishment.

The old lady flushed a little.

"Yes, friend, I understand whom thee means, my poor Robert had lost the sight of his left eye."

"I saw that man this morning!" I cried, "I saw him from the car window before we entered Lancaster. What strange misunderstanding is this?"

"Thee has mistaken some one else for him, that is all," said my companion gravely. "My boy thee could not have seen, for he died fifteen months ago the 15th of this month. He died of cholera, after two days' illness. Thee could not have seen Robert."

"I did, though—I did!" I cried, excitedly; and then I related to her the whole incident, dwelling particularly upon the signal I had never seen but once before in my life, and then made by him when he explained it to me. "I was not mistaken," I had concluded; "it could not be; your son was not an ordinary-looking man, and I remember his appearance distinctly. Surely as I sit here, I saw this morning the man who, you tell me, died fifteen months ago."

The old lady looked white and frightened, while as for me, I was growing so hysterical with bewilderment and excitement that she would allow me to pursue the subject no farther. She led me to my room and persuaded me to lie down, leaving me then, for she herself was too much agitated by the conversation we had to be able to soothe me.

I saw her no more that day. I did not go to tea, for the excitement of the day rendered me so seriously ill that I was not able to rise until a late hour the following morning. I was still dressing when there came a rap at my door, accompanied by the voice of my Quaker friend asking admittance.

I opened the door, and she entered with awe-struck face, and hands that trembled so she could hardly hold the newspaper to which she directed my attention.

"Friend," she said, "thy life has been saved by Divine interposition. The train in which thee was yesterday a passenger, in less than two hours after thee left it, was thrown over an embankment at a place called 'Gap,' and half of the passengers have been killed or wounded. Child! child! surely as thee ilves

that vision of my poor Robert was sent to save thee!"

That is all I have to tell. I know no more about the affair than I have written, and I have no comments to make upon it. I saw the one-eyed conductor make the signal of "danger ahead;" I was so much influenced by what I saw that I would not continue my journey. In less than two hours after that warning had been given the danger was met, and death, in the most appalling form, was the fate of more than fifty human beings.

These are the facts. It is equally a fact that the man whom I saw give the signal had then been dead more than a year. Explain the matter who can—I have no explanation to offer.

AN OFFERED EXPLANATION.

My attention was called to an article in the *Bradford Argus*, entitled "The One-Eyed Conductor," from the pen of a lady in Harrisburg, which purported to be a detailed account of an incident of her own life that occurred many years ago, and of which she expressed a desire of having an explanation. I have assumed the incident to be authentic; at least I have known of similar incidents that have occurred, and which appeared equally mysterious when viewed in a spiritual light.

I have an explanation to offer which, to my mind, appears to be based on rational and physiological principles, and which does not conflict with theological theories. It will be necessary to state some physiological laws as they are understood by eminent physiologists of the present day. Every impression, however transient, marks a lasting impression on the nerve cells, which compose that portion of the brain through which the mental faculties act, and can be recalled whenever the proper conditions obtain. These impressions are conveyed to the brain—through which the mind takes cognizance of them—by means of the several senses, by the eye, ear, touch, etc. As the nerve cells die and are removed, they are replaced by new ones which not only resemble their predecessors in form and appearance, but also receive their various changes and impresses. Thus preëxisting and newly-formed impressions are transmitted from generation to generation of the nerve cells. The mind, looking down upon these cells, is able to recognize and give to each change and impress its proper signification, as we, glancing over a printed page, comprehend the picture therein presented, without examining the letters that form the words, or even all of the latter. This is a theory of the production of memory. Whether

it be true or not, yet certain it is that many scenes and incidents have made impressions on us, and are retained in some way, and may be recalled to view by some particular train of thought or circumstances, though years may elapse before this occurs. A striking instance of the retentive powers of the memory in respect to casual occurrences, and the ability to reproduce them under favorable conditions, is afforded by the case of an uneducated servant girl who, while under the influence of a fever, astonished her friends and others by speaking Hebrew. They did not know what to think of it, and probably referred it to some supernatural influence; but on inquiry it was discovered that she had previously lived in the family of a Hebrew teacher, and while she sewed in one room he recited his Hebrew in an adjoining room. Thus the impressions were received, but could not be recalled until under the particular conditions that existed during the fever.

By the foregoing theory of the production of memory, it has been proposed to explain the momentary presentation of the whole events of the life of individuals suddenly exposed to great peril, and some have suggested that this may portray the judgment day, when all our thoughts, words, and actions shall be presented to us by our minds viewing the recorded impresses of memory. But enough of this theorizing.

Another law to be taken into consideration in this connection is, that any impression or irritation communicated to a nerve in any part of its course (thus being conveyed to the brain), or at its cerebral extremity, is referred to the distribution of that nerve on the surface of the body, or to the particular organ with which it may be connected, and *not* to the seat of impression or irritation. Thus, the fact of persons feeling their fingers and toes after the amputation of a limb, is explained by the nerve, being irritated at the seat of amputation, where it is divided, communicating the fact to the brain, and the mind, recognizing the impression on the latter, refers the seat of irritation to the point of original distribution of the nerve on the hand or foot, from which it has heretofore received its impressions through that particular nerve. So persons have seen flashes of light, heard various noises, perceived disagreeable tastes and odors from impressions made at their cerebral origin or along the course of the nerves of vision, audition, gustation, and olfaction; all of which sensations appeared to originate exterior to the body.

So much for the introduction, which is rather longer than I intended. Now for the application to this particular case.

The first thing that has any especial bearing on the subject, is the interview with the one-eyed conductor and his mother, on the day of the bridal trip from Philadelphia to Harrisburg. Mrs. L. was then young, inexperienced, impressible, and existing in a new relation socially and as to her surroundings. She is favorably attracted by the kind, gentlemanly conductor, and her interest is still more awakened in him when she forms the acquaintance of his venerable mother, and sees his filial attentions to her. Mrs. L. then forms his acquaintance, insomuch that they enter into conversation. He is agreeable and intelligent in railroad matters, which she knows very little about. He interests her by relating various things quite new to her, and among others he tells of the signal used to give warning of "danger ahead" on railroads. She becomes doubly interested while he relates this, and watches his every movement and gesture with absorbed attention. The eye receives the picture of the conductor as he appears before it making his gestures; an impression is received by that organ, is conveyed by its nerve to that particular part of the brain from which that nerve had its origin, and is recognized by the mind as having been received through the eye. Some impress or change is effected in those nerve cells which is permanent. The ear receives the sounds of the words, and conveys them to the portion of the brain to which its nerve is connected, and an impression is marked there. Observe that the conductor is looking toward Mrs. L., for he notices the troubled expression of her countenance.

That this scene affected Mrs. L. deeply, may be inferred, not only from her troubled look, but also from the fact that this was her first experience of any consequence in railroad-ing, and having a newly-wedded husband in her charge, she did not like the thought that she might see the actual working of the signal at any moment, and thus have occasion to prepare for a "flying leap" out of the car window with her precious burden in her arms. Of course she could not *then* think of leaving him behind, whatever might be her thoughts on the subject *now*. Her attention was soon withdrawn from the unpleasant thoughts, and they were forgotten for the time being. But the impressions are indelibly stamped upon her memory, and are liable to be reproduced at any time under the proper circumstances.

Now, passing to the time when Mrs. L. is on her way to the "City of Brotherly Love," we find her broken down in health, returning for the first time to her paternal home. She is making the same journey, in an opposite direction, that she did two years before when she had the interview with the "one-eyed conductor." She has no disposition for thought, but lets her mind sink into a state of lethargic brooding over her sorrows. She is aroused from this when the conductor of the train comes to collect her fare; she is then disappointed to find that it is not her genial friend of two years ago, but a man not very prepossessing in appearance. The "one-eyed conductor" and his mother are now remembered, "the first time for many months." After this she leans back and lapses into her mood of sad despondency, and remains in a semi-somnolent state, until the cry of "Lancaster, twenty minutes for dinner!" aroused her, when she sat up, "sleepily and languidly," and looked out of the window, to use her own words, "drowsy and indifferent, neither caring nor thinking much about what I saw. I noticed a man upon the roadside a little in front of the car in which I sat, gesticulating violently with his hands and arms." Lancaster is associated in Mrs. L.'s memory with the one-eyed conductor, for at that place his mother lived and got on the car the day Mrs. L. received the impressions of the former. From the above we see that Mrs. L. was aroused by the name Lancaster, and was gazing out of the window in a listless manner, when she thought she saw the one-eyed conductor. Now, when we gaze into space listlessly, we see objects in the circle of vision in a hazy, obscure, vacant manner, and not any one thing in particular. The mind is receiving no impressions from without, but is engaged, if at all, in combining, rearranging, or reviewing previously received thoughts and impressions.

Let us pause and consider that Mrs. L. had only two actual, active thoughts that day, after leaving Harrisburg, until she saw the one-eyed conductor, as she supposed. Those thoughts were both from memory—one was about the above gentleman and his mother, the other about Lancaster—and both closely associated in her memory. While Mrs. L. is gazing vacantly out of the car window, she is exercising no special control over her mental operations. Having just received an impression, the mind finds a similar one recorded on memory's leaf, and, glancing over the events impressed thereon two years before, it grasps the most promi-

nent impression in the picture, which is the one-eyed conductor at the time when he was executing the danger signal, and which has the idea of danger strongly associated. The mind, reviewing that picture, sees a man making certain known gestures; on closer observation it recognizes a particular man; until, finally, the conductor, with his personal appearance, look, gestures, etc., appears before the mind, written on the pages of memory, as he did two years previously, when the impression was taken—that is, looking in Mrs. L.'s face and within speaking distance, as she describes him as appearing. But it takes the mind but a moment to comprehend the above picture, and as the idea of danger was immediately connected with the impression when it was recorded, so now the thought of danger flashed forcibly upon the mind. By the time her mind had reached this stage, Mrs. L. was thoroughly awakened to the fact that it was taking cognizance of a strong impression, and found that the latter was the conductor making danger signals. At once she seized upon the connected idea of danger, and referred it to the present, and the circumstances were such that it was natural for her to have expected immediate "danger ahead" at any moment, and, consequently, the signal for it; and as she considered the danger a present reality, so she referred to the conductor and his gestures as the signal of that danger, and as in real existence before the eye, and *thus* communicated to the mind and *not* through the records of memory.

But if this was simply the mind recognizing impressions recorded two years before, why did it in reality appear to be taking place before Mrs. L.'s eyes? Because her mind referred those impressions, seen on the nerve cells, to the distribution of the nerve through which they were communicated to the brain—which, in this case, was the optic nerve, the nerve of vision, distributed to the eye—according to the physiological law stated above, and being referred to the eye it appeared to be originating there. Flashes of light, produced by irritation of the optic nerve-centers, appear to have an external origin, but in reality have an internal one, yet the mind recognizes them as being received through the usual channel—the eye. Prof. Dalton says: "Even in a reverie, in the waking condition, when the absorption of the mind in its own thoughts is complete, and we are withdrawn altogether from outward influences, we see objects which have no present existence as if they were actually before us."

So Mrs. L.'s mind saw, engraved on mem-

ory's plate so vividly and with such striking reality, a portion of the scene that occurred on the car the day of the bridal trip, that it seemed to be in actual existence before her eyes. The motion of the car, and a nervous system enfeebled and rendered impressible and excitable by disease and suffering, no doubt contributed largely to the effect.

Thus I think that this incident was an act of memory and not of sight; that it had not an actual existence before the eyes. That is the point I wish to make. When I first read the piece I was disposed to look upon it as purely an act of imagination, but when I thought over it a little, it occurred to me that it was an act of memory forcibly portrayed—an abstract taken from the car scene acted two years before, and called forth at that time by the existing conditions. There may be a theological question raised here, as to whether the recalling of this incident to the mind through the agency of the memory, with the various trains of thought thus induced, was an accidental circumstance or not?

I believe in special Providences, and not in accidental occurrences. But I do not believe that the Ruler of the Universe employs miraculous means for the accomplishment of a certain end, when it can be attained by the use of means and laws already in existence. I do not believe in Spiritualism as understood at the present day.

If it be true that angels, good and bad, have access to our minds, our thoughts, and mental operations, it is reasonable to suppose that they may have some influence over us by way of suggestions; and good angels, acting under Divine direction, may induce us to follow particular trains of thought, or our minds to review certain portions of memory, that will lead to results that will be for our welfare, both spiritual and temporal.

[This "offered explanation" contains much that is acceptable to logic and science. It is in keeping with the views of our best psychological metaphysicians, and, considered from the point of view of pure reason, probably comes as near to a practical solution of the problem as any that might be attempted at this stage of scientific enlightenment. Doubtless those who entertain faith in the doctrine that the spirits of the departed can, on occasion, exert an influence on the affairs of their friends in the present life, will find little trouble in attributing the appearance of "The One-Eyed Conductor" to Mrs. L. as a reality. We have recently read a work by Rev. Samuel Watson (a new

book), just published in this city, at \$1.25, entitled "The Clock Struck One," in which are presented the Bible proofs that the dead of earth have communicated and can communicate with men on earth, and we were surprised by the number and significance of the proofs cited. Mr. Watson, who has been a devoted Methodist minister for many years, and has been honored with the title D.D., and still holds his relations with that Church, thinks that many eminent Christians, several of the ministers, and one of them a bishop, have talked with him from the other side of the river called death. He claims

to be a Bible spiritualist, and to accept only that which finds its basis in the Bible. If the deceased prophet Samuel could be made visible to those living on the earth in ancient times, why could not the "One-Eyed Conductor" be able to do the same for a beneficent purpose?

We insert a few of Mr. Watson's quotations, but do not give his cogent comments: Heb. i. 14; Gen. xviii. 2; Jud. xiii. 8; 1 Sam. xxviii. 3; Ezek. ix. 2; Dan. viii. 18; Dan. ix. 21; Dan. x. 5; Dan. vii. 13, 16; Dan. xii. 5, 7; Zech. i. 8; Mark xvi. 5; Luke xxiv. 4, 5; John xx. 12; Acts i. 9-11; Acts xvi. 9; Rev. xx. 11.]

Our Country and Its Resources.

That which makes a good Constitution must keep it, viz., men of wisdom and virtue; qualities that, because they descend not with worldly inheritance, must be carefully propagated by a virtuous education of youth.—*William Penn.*

JAPANESE IN AMERICA.

THE visit of the Japanese Embassy to the United States has occasioned no little interest. Public attention being drawn to that distant and once exclusive country, Japan, it has been surprised by the extent of the civilization of a people once accounted but little removed from the barbarous heathen. We have learned now that theirs is a civilization of a different kind from ours, but yet analagous in its culture of the intellectual powers. In this number we present two young Japanese, who may be regarded as fair types of modern Japan, and whose high official positions warrant for them more than a passing notice.

ARINORI MORI, CHARGÉ D'AFFAIRES FOR JAPAN.

The physiology of Mr. Mori indicates strength and activity; his head is high and long rather than broad, showing intelligence, affection, and moral sentiment rather than mere animal force, courage, and selfish passion. The length of the head from the opening of the ear forward is considerable, indicating not only a good degree of intelligence but a large degree of the

perceptive organs. He has the power of appreciating facts and details, of acquiring information, and of making himself acquainted thoroughly with all the historical facts that go to produce ultimate results. He is more inclined to deal in facts than he is to dwell in the realm of mental speculation or theory; hence his inferences are generally sound because he acquires all the facts at the start. He has a good indication of historical memory; has a great deal of comparison; a quick recognition of character and motive; reads men like a book; is respectful and kind in his spirit, but not remarkable for mellowness and plausibility of manner. He is firm, steadfast, positive, and determined without being rash in spirit or severe in disposition. He has dignity, pride and self-reliance; is not remarkable for the love of praise; appreciates kindly consideration, but naturally inclines to take a straightforward course and perform his duty with directness and fidelity, whether his policy is popular or otherwise. He does not incline to follow party at the expense of duty.

He is patriotic, fond of home and country ; appreciates society, is well adapted to speak and write with freedom and accuracy ; has a sharp, clear, vigorous intellect ; is not a theorist or speculator, but follows facts very closely, and inclines to take practical views of life.

His organization is favorable to take on and properly illustrate the best forms of civilization, and it may be said that his

he was appointed *Chargé d'Affaires* of Japan, to reside in Washington.

It is expected that he will remain as resident minister in Washington.

He is greatly interested in the general progress of knowledge, and desirous to promote the advancement of his country in all good things. By his intercourse with our official representatives and by his visits to different parts of the country he has gained the confidence and esteem of very many distinguished Americans.



PORTRAIT OF ARINORI MORI.

country is fortunate in possessing his services in the new relations which it sustains to the rest of the world.

Jugoi Arinori Mori was born at Satsuma, Japan, and is less than thirty years of age. He was one of the first Japanese students educated in London, and after coming to America returned to Japan and entered the service of his government.

In the spring of 1871, the first to receive a diplomatic mission from his government,

While occupying a seat in the National Legislature of his country, Mr. Mori introduced a proposition to abolish the ancient custom of wearing two swords by the members of the highest classes, and succeeded in carrying the measure through against very determined opposition. In the Military Museum attached to the War Department at Washington is one of the swords formerly worn by a Japanese official who, at the time Mr. Mori introduced the resolution above referred to, opposed it, but who subsequently

made a practical acknowledgment of its wisdom by presenting the sword, through Mr. Mori, to our government. The blade of this weapon is said to have been manufactured over three hundred years ago. It was Mr. Mori's idea that Japan should send some of her young women to America to be educated, and in pursuance of his recommendation there are now several young Japanese girls in this country under his protection. Of the young men who have left their far-off home to avail themselves of our educational

furnishes some practical views of the extent and resources of our country.

The "Preliminary Note" to this book is suggestive. We copy a paragraph: "The knowledge furnished by all the better qualified minds of the world is a powerful element, rendering great service in the cause of humanity. It is often the case that enmity and bloodshed are the consequence of storing up prejudices resulting from the want of mutual knowledge of the parties engaged. The object of this publication is not only to



PORTRAIT OF KOZO SOOGIWOORA.

advantages the number is estimated at five hundred, two hundred at least now being here and distributed among our better institutions.

In the latter part of 1871 Mr. Mori prepared a volume on "Life and Resources in America" for the information of his government and people at home. In this volume he briefly explains the character and constitution of our government and public institutions; describes our ways of life, literature, religion, and individual characteristics; and

aid in removing those prejudices, but also to invite all the lovers of their race in Japan to join in the noble march of progress and human happiness."

KOZO SOOGIWOORA, SECRETARY OF THE
JAPANESE EMBASSY.

Here is evidently a strong resemblance to the mother in the intellect, judgment, and practical talent, and in the intuitive readiness of the mind. He seizes upon truth almost intuitively and comes to con-

clusions quickly, and afterward retraces his mental steps and studies out the law or the causes, or the "why and wherefore" of his conclusions, but makes his conclusions first and studies the philosophy of them afterward. He has talent for reading character, for understanding the motives and dispositions of strangers.

He has capacity for understanding mechanism; he will look into a piece of machinery which is complicated and readily see through and understand it. He would learn to use skillfully the tools or instruments of a trade or profession.

He appreciates property, would comprehend the laws of commerce and excel in merchandising, in financiering.

He has force of character, courage, thoroughness, not bitterness and cruelty, but a tendency to be master of the position, to defend and protect himself, and in that way to command the respect of others. He has the power to govern; his horse, his servant, his dog appreciate his governing power and obey his will.

He is known for very great firmness and determination of purpose; he stands up squarely and strongly to the duties and responsibilities which may be laid upon him on the same principle that a ship which is well down in the water and well ballasted will sail more steadily and safely.

He is a good friend, but he does not play the sycophant to anybody, and he does not go more than half way toward friends; he does not urge himself upon them, but in a dignified manner meets them half way, and if they choose to come he is cordial; but the moment a man shows himself cool at all he is able to withdraw his friendship and stand on his dignity, or drop that friend and find another.

He is fond of pets, capable of devoted attachment to woman; is not strong in his Hope, does not look on the bright side alone

of the future, but calculates the opportunities for disaster and inconvenience and delay, if not utter disappointment.

His reverence for whatever is sacred and respectable is comparatively strong, but he is more conscientious, more honest, and more kindly than he is devout, hopeful or credulous.

His Faith is rather limited, and he argues possibilities and probabilities, and holds on to absolute realities as much as he can; he does not exercise confidence or credulity unless there is something to build it on; as we put pickets on rails which are attached to the posts of the fence, so he nails his faith only on something which has a pretty strong framework of sound philosophy to hold it.

He will be known wherever he may go among men as a steadfast, upright, watchful, prudent, persevering, dignified, ambitious, thorough, energetic man, with enough of heart and affection to win people, and enough intelligence to guide and direct his conduct, and in a great measure to control others.

Kozo Soogiwoora was born in Satsuma, Japan, in the year 1844. After being educated in a native college and being a teacher there, he went to London, England, in the spring of 1865, and studied the English language and other branches of a liberal education.

He remained in England three years, at University College, London, his expenses being defrayed by the Japanese government.

His thirst to see the world and to study the institutions and literature of European nations induced him to devote himself to study and leave the military service at home in Japan.

He came to America to continue his studies, and entered one of our best literary institutions, with which he was connected as a student four years. During all this time he had the charge of the Japanese young men who had been sent to the United States for their education.

He was appointed by his government a

member of the Embassy in Washington, and has performed the duties of a Secretary. In this connection he has traveled through much of this country.

At a banquet given by the Boston Board of Trade in honor of the visit of the Japanese Embassy to their city in August, Mr. Soogiwoora delivered the following address in English, which at once indicates comprehensively the mental culture of this young diplomat and the status of Japan in her international relations:

"I have often heard people say that Boston is the brain of the American Union. By this I understand that your city is the point where the human mind has received the greatest attention and culture in the different departments of science and of learning. It is, indeed, a great honor and a sincere pleasure for all connected with this Embassy to meet you here as the representatives of a people whose fame has gone around the world; everywhere known as a community who have reached a very high degree of distinction in the literary, the scientific, the mechanic, and the educational branches of civilization. It seems needless to remind you that our country is much indebted to yours for having induced us to open our ports to the external world, the result of which we feared at first, but now we fully appreciate. It is a blessing which has already brought us much advantage, and from which we now hope for greater good. Under the wise advice of your country we now find ourselves moving in the right direction, taking steps to elevate and instruct our people, when otherwise we might have remained in ignorance of the actual condition of the world we live in, and never have realized the thousand good things we are now acquiring since opening our country to

foreign nations. Commodities of every variety have been exchanged in the interest of commerce, and our people have been actively engaged in developing our industrial resources and mechanical arts. Prominent among our benefits has been the commerce of ideas. No longer inactive, new thoughts, heretofore unknown to our people, are constantly imported by our travelers and students who have been abroad. Our beloved country, old in years, is now emerging with all the freshness and ardor of youth. Old systems of administration and primitive modes of education are gradually changing and being largely replaced by those adopted from this noble land. A still more important result than any other is the steady removal of prejudice, which is fading from the minds of the great masses of our people toward foreigners, and which was formerly a chief obstacle to free and friendly intercourse with foreign nations. My best observation leads me to believe that to-day our people at large are beginning to understand their relations to the world, and our great national wish is to gain and preserve the sincere friendship of your people and that of all progressive nations. All this favorable change and progress are entirely due to what I have called commerce of ideas, to the development of which America has so largely contributed. The friendly sentiments so universally expressed in this country toward our people appear to us a strong guarantee that our nations are designed to be the best friends forever. We rejoice in the constant steam communication you have already established across the Pacific, and shall eagerly welcome an ocean submarine cable, whenever laid, to unite us with our nearest neighbor, whose shores are washed by the waters of the great Pacific Ocean."

FARMING IN THE SOUTH.

LETTER FIRST—MISSISSIPPI.

A LONG the Mississippi River and its tributaries lie some of the richest lands in the world; a very paradise for a farming population embodying capital, science, and enterprise.

The soil, a heavy clay, contains a large percentage of organic matter, the accumulation of

the centuries they have lain uncultivated, and been annually enriched by the debris of their own products. From the very nature of the land it retains water, and in order to succeed in farming it to the greatest perfection should have a thorough system of drainage, not only to get rid of the superabundant moisture, but

to admit air and its salutary influence for the neutralization of those poisonous gases in the subsoil, which are doubtless the prolific source of premature decline in the cotton plant and the rapid breeding of the larvæ of caterpillars. Drainage, subsoil plowing, and imported fertilizers are, however, very little used in Mississippi, where, as in the West generally, the short-sighted, make-haste-to-be-rich policy prevails, the object of which seems to be to get all one can out of the land with the least possible outlay in improvement. So, when a man buys a farm here he goes right in for planting cotton, strains every nerve to get in a large area, and having gathered the crop, which in Mississippi takes till Christmas, he lets it lie till March, when the cotton stalks are knocked down, and partially plowed in, often not even returning the cotton seed to the generous mother-soil. The same spirit of present gain metamorphoses the finest of forests into "deadening," involving a lamentable loss of the best timber in the world. The log-rollings in spring constitute a holocaust of raw material, hardly ever to be replaced.

Mississippi is characterized by a considerable variety of climate and soil, the oak ridges and alluvial bottoms of the northern part contrasting strongly with the piny barren lands that lie along the Yalabusha and Yazoo rivers. It was settled some thirty-five years ago principally by Carolinians, who found these choice hunting grounds of the Chickasaws a most inviting theater of action, whereon to move their negroes and cultivate the great Southern staples. It was, indeed, a very lovely land, as seen in the budding glories of a blushing May, veiled in snowy cornus blooms, purpling in red bud blossoms, with a garment of wild pea vines interwoven in massy luxuriance, beneath forests that stretched out like parks, with no undergrowth, and in the vistas of whose cathedral-like aisles roamed the red deer and the wild turkey, in apparently exhaustless herds and flocks. The Indians disappeared, and here and there uprose the "block houses" of the whites, a warm and substantial style of building, in some instances not unpicturesque, where taste is brought to bear in judicious grouping of trees and vines. In those days people in this country got rich fast; but the war came, revolutionizing the system of labor, and now they are just beginning to adapt themselves to the new state of things.

The freedmen are quite a different element from the slaves, tolerably subordinate, but

exceedingly lazy, exceedingly improvident, and, generally speaking, indifferent to the interests of their employers, combining with the old slavery eye-service a grudge against the former masters, which politicians industriously fan into bitterness. They are making slow progress educationally. It will take a generation yet before they can be classed among enlightened mankind.

Under the present imperfect, in fact wretchedly managed system of farming, with poor fences, choked-up ditches, incursions of stock, inefficient arrangements for feeding and wintering cows, horses, and hogs, the bottom lands produce from thirty-five to forty bushels of corn per acre, or a bale of cotton when the seasons are favorable. With such a poor crop year as 1871 was, the yield was twenty-five bushels and half a bale of cotton. The corn crop in this country did not, in fact, suffer very seriously from the August drought, but cotton shed its leaves and put on a general sickly look. Yet the late and favorable fall matured the bolls wonderfully. Planters freely pay seventy-five cents and board for every hundred pounds picked.

Corn in this country sells for fifty cents a bushel, bacon twelve and a half cents per pound, potatoes fifty cents a bushel.

Land is readily rented and *self-supporting*, while rentors are greatly in demand. The truth is, Mississippi needs emigrants, and it is a great pity that some hundreds or thousands of those thrifty Maine Loggers, Green Mountain Boys, or Granite State men can not be induced to come here. After renting two years they would be able to buy land and would find it easy to make a good living in this generous clime. House servants are a great desideratum here. A cook gets her board and ten dollars a month; in some instances white servants receive fifteen.

The present labor system is unreliable to the last degree. The freedmen, delivered from the restraint of personal fear which formerly kept them, like so many immature, undeveloped children, to a certain routine, have not learned to be industrious and saving from self-interest, and here they fritter away more than half their time in sleeping, playing marbles, games of chance, and exhaust themselves by dancing nearly every night in the week till midnight, while Sunday is a perfect air-pump, into which they shout away so much breath that, to use a Western phrase, they are "done for" till the middle of the next week.

V. DU RANT COVINGTON.

ROCKY MOUNTAIN ECHOES.—No. 4.

CHIANN.*

BY WILLIAM E. PABOR.

Evermore

THE GRAND CHIANN, in stately glory,
Lives in song and grows in story;
From the gold-besprinkled sand,
Sloping up to the Sierras;
Sloping thence to shores whose terrors
By Atlantic storms are fanned.

Looking East,

As if a new priest demanding
For its Luther's Pulpit, standing
Vacant on its rugged breast,
To proclaim to earth's far corners,
To the weary, to the mourners,
"Here is comfort, here is rest."

Looking North,

Questioning its brother ranges
Of the mystery of changes
In the eons of the past;
Ere the tireless touch of human,
Hand of man or foot of woman,
In its shadow had been cast.

Looking South,

Past the Spanish Peaks, and reaching
Halls where Montezuma's teaching
Lingers still in swarthy breast;

Where the palm and olive blossom,
And the cactus leaves embosom
Odors sweet to lovers' test.

Evermore

Grand, majestic, stately, solemn,
On thy bosom many a column,
Shaft, and pedestal arise;
Thou hast hidden chasms yawning,
Where the brightness of the morning
Would be nature's swift surprise.

Evermore

In thy vales and cañons vernal,
There are pines whose brows eternal
Crown of emerald have worn;
And the dashing of thy waters
Charmed the Shoshone's dusky daughters
In the ages long by-gone.

Evermore

Charm of sunshine, charm of shadow,
Charm of mountain, charm of meadow,
In thy bosom we can trace;
And thy massive, grand completeness
Is still linked with simple sweetness
In the beauty of thy face.

* Pronounced by Ludlow and other writers "the grandest mountain in the world." Five miles south of Colorado Springs, fifteen miles east of Pike's Peak.

"HAVE YOU BEEN THERE?"

ON reaching London, Paris, Berlin, Vienna, or other European cities, one of the first questions put to an American is of this nature: "Have you been to Niagara? or up the great Lakes? or up the Mississippi? or the Missouri? or to the great prairies? or to the Rocky Mountains? or to California? or to the hundred and one other wonderful objects to be seen nowhere else in the world besides in America? Have you seen all or any of these? If so, do please tell us about them? We have read accounts which seemed fabulous, and we want to hear, with our own ears, what your own eyes have seen." How embarrassing it is to an intelligent American to be unable to tell Europeans scarcely anything of his own country. We have suffered ourselves from our ignorance when thus interrogated. Before going abroad, we had traveled more than 50,000 miles in this country, having lectured in all the States, and in nearly all the territories, including the N. A. British Provinces,

still we had not "seen it all," nor had we posted ourselves as thoroughly in regard to our natural resources as we should have done, nor as we have since done.

It is the fashion, just now, for Americans to go to Europe—even for those "green things," just out of their teens, who know next to nothing of their own country and its institutions. But they will soon be found out, and see how extremely shallow they are. Still they must go to Europe. The voyage and the salt sea air will do them good. It will also teach them a useful lesson as to the manners and customs of modest and well-bred people abroad; of their simplicity in dress, economy in living, and mutual deference and respect—qualities which many young Americans very much lack. We would encourage all who can afford it to travel. It is healthful, educational, humanizing, and improving. But we would have Americans travel first in *their own country*; then let them visit other

countries—the more the better. It is much more sensible to spend surplus time and money in travel, than in luxurious living, fashionable display, dissipation, and so forth.

There is something of reciprocity in this matter of travel. While Americans go abroad in large numbers, Europeans visit America, and more come here to stay than go there to see. So that, on the whole, we are gainers.

A paragraph in a morning journal says:

“The descriptions which have been published of the grandeur of the mountain scenery in Nevada, Utah, and Colorado; of the picturesque beauty of the Yo Semite valley, and the mammoth trees of California, have awakened in the minds of European tourists a desire to visit those localities rather than to follow the beaten track traced by Murray in his hand-books; and as a consequence of the interest which has been aroused, the first party of tourists who have selected this country as the scene of their wanderings arrived on Monday from Vienna by the steamer Oceanic. The party includes the Count Festitis, a cousin of Prince Metternich, Count Geroe, Lord Blumen, and

other noblemen, who intend, after rendering themselves familiar with American institutions, to go West, hunt the buffalo, and explore the remote regions of Colorado, Nevada, and Oregon. They state that other parties are forming for the same purpose, and that Fashion, who regulates the direction of the traveler quite as much as his dress, when at home, is pointing her finger in this direction.”

Now this is sensible. But why not Americans form just such parties, and instead of frittering away time and money in flirting among the fashionable watering-places, get up parties of twenty-five or thirty and see something of their own magnificent country? Why not? There would be sense and health in it.

Our old friend, Mr. Thomas Cook, the English excursionist, is expected here with a party of European tourists, on a pleasure trip around the world. He will proceed *via* Chicago, Omaha, Salt Lake City, San Francisco, taking in the Yo Semite and the Big Trees; thence to China, Japan, and New Zealand, Australia, and so home. Delightful! May we go next year!

Physiognomy, or Signs of Character.

Of the soul, the body form doth take,
For soul is form, and doth the body make.—Spenser.

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONTINUED FROM OUR SEPTEMBER NUMBER.]

FEAR.

“Nam Timor unus erat, facies non una timoris,
Pars lanat crines, pars sine mente sedet.
Altera mœsta silet, frustra vocat altera matrem,
Hæc queritur, stupet hæc, hæc fugit, illa manet.”
OVID *de Arte Amandi*.

SO Ovid describes the Sabine virgins, and such the tumultuary and distracted state of mind produced by fear. “And there is good reason for this, because in a sudden daunt and onset of an unexpected evil, the spirits which were before orderly carried by their several due motions unto their natural works, are, upon this strange appearance and instant oppression of danger, so disordered, mixed, and stifled that there is no power

left either in the soul for counsel or in the body for execution.” In mere bodily fear there is mere animal expression and meanness. The breath is drawn and the respiration suspended; the body fixed and powerless; the eyes riveted or searching and unsteady, and the action undetermined.

Mr. Burke, in his speculations on fear, assimilates it, with perhaps too little discrimination, to pain. “A man in great pain,” he observes, “has his teeth set; his eyebrows are violently contracted; his forehead is wrinkled; his eyes are dragged inward and rolled with great vehemence; his hair stands on end; his voice is forced out in short

shrieks and groans, and the whole fabric totters." "Fear or terror," he continues, "which is an apprehension of pain or death, exhibits exactly the same effects, approaching in violence to those just mentioned, in proportion to the nearness of the cause and the weakness of the subject."*

But there is one distinguishing feature of the two conditions: the immediate effect of pain is to produce an energetic action and tension of the whole frame; that of fear is to relax all the energy of mind and of body—to paralyze, as it were, every muscle. Mr. Burke seems to have written loosely, partly from forgetting that pain and fear are often combined, and partly from taking a view of the subject too much limited to the particular conclusion which he wished to enforce. There can not be great pain without its being attended by the distraction of doubts and fears; the dread even of death is a natural consequence of extreme pain, and so the expression of fear in the countenance is frequently mingled with that of pain. But, perhaps, there are few passions which may not be assimilated by such combinations, fear and hatred, hatred and rage, rage and vengeance and remorse. On the other hand, confining ourselves to simple bodily fear, there is much truth in the observation of this eloquent writer. The fear of boiling water falling on the legs gives an expression of the anticipation of scalding, resembling the meaner expression of bodily pain. As Mr. Burke says, fear in a dog will no doubt be that of the lash, and he will yelp and howl as if he actually felt the blows; and this, indeed, is the only kind of fear which brutes know. The higher degrees of fear, in which the mind operates and which we shall see characterized in the countenance by an expression peculiar to mental energy, do not appear in them.

In man the expression of mere bodily fear is like that of animals, without dignity; it is the mean anticipation of pain. The eyeball is largely uncovered, the eyes staring, and the eyebrows elevated to the utmost stretch. There is a spasmodic affection of

the diaphragm and muscles of the chest, disturbing the breathing, producing a gasping in the throat, with an inflation of the nostril, convulsive opening of the mouth, and dropping of the jaw; the lips nearly conceal the teeth, yet allow the tongue to be seen, the space between the nostril and the lip being full. There is a hollowness and convulsive motion of the cheeks, and a trembling of the lips and muscles on the side of the neck. The lungs are kept distended, while the breathing is short and rapid. From the connection of the nerves of the lungs and diaphragm with those of the side of the neck, and with the branches which supply the cutaneous muscle of the cheek and neck, we may comprehend the cause of the convulsive motion of this muscle.* The aspect is pale and cadaverous from the receding of the blood. The hair is lifted up by the creeping of the skin and action of the occipito frontalis.



FIG. 1.—FEAR—MINGLED WITH WONDER.

In the preceding sketch I have endeavored to express fear mingled with wonder. But if we should suppose the fear there represented to have arisen from apprehended danger still remote, and that the object of fear approaches, and is now about to cleave to the person, he trembles, looks pale, has a cold sweat on his face, and in proportion as the imagination has less room to range in, as

* "Sublime and Beautiful," Part IV. sec. 3. Cause of Pain and Fear.

* See Essay on the Nerves.

the danger is more distinctly visible, the expression partakes more of actual bodily pain. The scream of fear is heard, the eyes start



FIG. 2.—FEAR—FROM APPROACHING DANGER.

forward, the lips are drawn wide, the hands are clenched, and the expression becomes more strictly animal and indicative of such fear as is common to brutes.*

I should apply the name of terror to that kind of fear in which there is a strong work-

* I shall here transcribe a portion from my brother's volume on Italy. Mr. John Bell traveled in declining health, and died in Rome in 1820. He had written a great deal with a pencil in the course of his journey, and no less than thirty small volumes of notes, thus jotted down on his knee, were submitted by his widow to Prof. Bell and myself. In these we saw much to admire, but knowing how much would have been changed and corrected had our brother lived, we thought them unfit for publication. Of the many striking passages in the work the following may be selected as relating to the present subject:

"*Turin.—The Execution of an Assassin.*—I found myself opposite to the distracted criminal whom they were conducting to execution in all the agonies of terror and despair. He was seated in a black car, preceded by arquebustiers on horseback, carrying their carbines pointed forward. These were followed by a band of priests, clothed in long black robes, singing, in deep and solemn tones, a slow, mournful dirge—part of the service for the dead. A hot, burning sun shone with a flood of light; and, though it was mid-day, such was the silence, and such the power and effect of this solemn chant, that its sound was re-echoed from every distant street. The brothers of the Misericordia, clothed in black and masked, walked by the side of the car and joined in the chant. On the steps of the car sat a man bearing a flag on which Death was represented in the usual forms, and on which was inscribed in Latin (if I read it rightly), 'Death has touched me with his fingers,' or 'Death has laid his hands on me.' On each side of the car the offic-

ing of the imagination, and which is, therefore, peculiar to man. The eye is bewildered, the inner extremity of the eyebrows is elevated and strongly knit by the action of the corrugator, thus producing an expression of distracting thought, anxiety, and alarm, and one which does not belong to animals. The cheek is a little raised, and all the muscles which are concentrated about the mouth are active, there being a kind of modulating action in the circular muscle of the lips which keeps the mouth partially open. The cutaneous muscle of the neck, the platysma myoides, is strongly contracted, and its fibers may be seen starting into action like cords, under the skin, and dragging powerfully on the angles of the mouth. The imagination wanders, there is an indecision in the action, the steps are furtive and unequal, there is a spasm which hinders speech, and the color of the cheeks vanishes.

"Canst thou quake and change thy color,
Murder thy breath in middle of a word,
And then again begin, and stop again,
As if thou wast distraught and mad with terror?"*

When mingled with astonishment, terror is fixed and mute. The fugitive and unnerved steps of mere terror are then changed for the rooted and motionless figure of a

lating priests were seated, and in the center sat the criminal himself. It was impossible to witness the condition of this unhappy wretch without terror, and yet, as if impelled by some strange infatuation, it was equally impossible not to gaze upon an object so wild, so full of horror. He seemed about thirty-five years of age, of large and muscular form, his countenance marked by strong and savage features, half naked, pale as death, agonized with terror, every limb strained in anguish, his hands clenched convulsively, the sweat breaking out on his bent and contracted brow, he kissed incessantly the figure of our Saviour, painted on the flag which was suspended before him, but with an agony of wildness and despair, of which nothing ever exhibited on the stage can give the slightest conception. I could not refrain from moralizing upon the scene here presented. The horror that the priest had excited in the soul of this savage was greater than the fear of the most cruel death could ever have produced. But the terrors thus raised were the superstitions of an ignorant and bewildered mind bereft of animal courage, and impressed with some confused belief that eternal safety was to be instantly secured by external marks of homage to the image. There was here none of the composed, conscious, awful penitence of a Christian, and it was evident that the priest was anxious only to produce a being in the near prospect of death, whose condition should alarm all that looked on him. The attempt was successful."—*Observations on Italy*, p. 48. By the late John Bell. Published by his Widow. Edinburgh, 1825.

* Richard III. Act iii. Scene 5.

creature appalled and stupefied. Spenser characterizes well this kind of terror:

"He answer'd nought at all; but adding new
Fear to his first amazement, staring wide
With stony eyes, and heartless, hollow hue,
Astonish'd stood, as one that had espy'd
Infernal furies with their chains unty'd.

* * * * *
But trembling every joint did inly quake,
And falt'ring tongue at last these words seem'd
forth to shake." *

Horror differs from both fear and terror, although more nearly allied to the last than to the first. It is superior to both in this, that it is less imbued with personal alarm. It is more full of sympathy with the sufferings of others than engaged with our own. We are struck with horror even at the spectacle of artificial distress, but it is peculiarly excited by the real danger or pain of another. We see a child in the hazard of being crushed by an enormous weight, with sensations of extreme horror. Horror is full of energy; the body is in the utmost tension, not unnerved by fear. The flesh creeps, and a sensation of cold seems to chill the blood; the term is applicable of "damp horror."

Despair is a mingled emotion. While terror is in some measure the balancing and distraction of a mind occupied with an uncertainty of danger, despair is the total wreck of hope, the terrible assurance of ruin having closed around beyond all power of escape. The expression of despair must vary with the nature of the distress of which it forms the acmé. In certain circumstances it will assume a bewildered, distracted air, as if madness were likely to be the only close to the mental agony. Sometimes there is at once a wildness in the looks and total relaxation, as if falling into insensibility, or there is upon the countenance of the desperate man a horrid gloom; the eye is fixed, yet he neither sees nor hears aught, nor is sensible of what surrounds him. The features are shrunk and livid, and convulsion and tremors affect the muscles of the face. Hogarth has chosen well the scene of his picture of despair. In a gaming-house the wreck of all hope affects, in a thousand various ways, the victims of this vice, but in every representation of despair an inconsolable and total abandonment of those exertions to which hope

inspires and excites a man, forms an essential feature. We have two fine descriptions of despair given in detail by English poets. One is by Spenser:

"The darksome cave they enter, where they find
That cursed man, low sitting on the ground,
Musing full sadly in his sullen mind;
His greasy locks, long growing and unbound,
Disorder'd hung about his shoulders round,
And hid his face; through which his hollow eyne
Look, deadly dull, and stared as astound;
His raw-bone cheeks, through penury and pine,
Were shrunk into his jaws, as he did never dine." *

The other is in the tragedy of the "Gamester," where Beverley, after heart-rending reiteration of hope and disappointment, having staked the last resource of his wife and family on one fatal throw, finds himself suddenly plunged into ruin.

"When all was lost he fixed his eyes upon the ground and stood some time, with folded arms, stupid and motionless; then, snatching his sword that hung against the wainscot, he sat him down, and with a look of fixed attention drew figures on the floor. At last he started up, looked wild, and trembled; and, like a woman seized with her sex's fits, laughed out aloud, while the tears trickled down his face. So he left the room."

A painter may have to represent terror, despair, astonishment, and supernatural awe, mingled in one powerful expression of emotion. In a mind racked with deep despair, conscious of strength and courage, but withered and subdued by supernatural agency, the expression is quite removed from all meanness; it must be preserved grand and terrific; the hero may still appear, though palpitating and drained of vigor.

Milton has admirably sketched the nerveless stupefaction of mingled astonishment and horror:

"On th' other side, Adam, soon as he heard
The fatal trespass done by Eve, amazed,
Astonied stood and blank, while horror chill
Ran through his veins, and all his joints relax'd;
From his slack hand the garland wreath'd for Eve
Down dropp'd, and all the faded roses shed;
Speechless he stood and pale, till thus at length
First to himself he inward silence broke." †

In admiration the faculty of sight is enjoyed to the utmost, and all else is forgotten. The brow is expanded and unruffled, the eyebrow gently raised, the eyelid lifted

* Faery Queen, Book i. cant. 9, v. 24.

* Faery Queen, Book i. cant. 9, v. 35.

† Paradise Lost, Book ix. v. 888.

so as to expose the colored circle of the eye, while the lower part of the face is relaxed in a gentle smile. The mouth is open, the jaw a little fallen, and by the relaxation of the lower lip we just perceive the edge of the lower teeth and the tongue. The posture of the body is most expressive when it seems arrested in some familiar action.

Joy is distinguishable from pleasure. It consists, not so much in the sense of gratification, as in the delight of the conviction that the long-expected pleasure is within our reach, and the lively anticipation of the enjoyment which is now decked out in its most favorite and alluring shape. A certain sensation of want is mingled with joy; a recollection of the alternate hopes and fears which formerly distracted the mind, contrasted with the immediate assurance of gratification.

In joy the eyebrow is raised moderately, but without any angularity; the forehead is smooth; the eye full, lively, and sparkling; the nostril is moderately inflated, and a smile is on the lips. In all the exhilarating emotions, the eyebrow, the eyelids, the nostril, and the angle of the mouth are raised. In the depressing passions it is the reverse. For example, in discontent the brow is clouded, the nose peculiarly arched, and the angle of the mouth drawn down.

Contrasted with joy is the testy, peevish, peevish countenance bred of melancholy; as of one who is incapable of receiving satisfaction from whatever source it may be offered; who can not endure any man to look steadily upon him, or even speak to him, or laugh, or jest, or be familiar, or hem, or point, without thinking himself contemned, insulted, or neglected.

The arching of the mouth and peculiar form of the wings of the nose are produced by the conjoint action of the triangular muscle which depresses the angles of the mouth, and the superbus, whose individual action protrudes the lower lip. The very peevish

turn given to the eyebrows, the acute upward inflection of their inner extremities, and the meeting of the perpendicular and transverse furrows in the middle of the forehead, are produced by the opposed action of part of the frontal muscle and of the corrugator.

Habitual suspicion and jealousy are symptoms and accompaniments of melancholy. Envy may be classed with these expressions, but it is an ungenerous repining, not a momentary passion.* "It consumes a man as a moth does a garment, to be a living anatomy,



FIG. 3.—JEALOUSY.

a skeleton—to be a lean and pale carcass quickened with the fiend—'*intabescetque videndo.*'"

Suspicion is characterized by earnest attention, with a certain timorous obliquity of the eyes:

"Foul, ill-favored, and grim,
Under his eyebrows looking still askance;
And ever as Dissemblance laugh'd on him,

* "La invidia, crudelissimo dolore di animo, per il bene altrui, fa ritirar tutti i membri, come contraere et offuscar le ciglie, stringere i denti, ritirar le labbra, torcersi con certa passione di sguardo quasi in atto di volere intendere et spiare i fatti altrui," etc.—LOMAZZO, p. 130.

He lour'd on her with dangerous eye glance,
 Showing his nature in his countenance:
 His rolling eyes did never rest in place,
 But walk'd each where, for fear of hid mischance,
 Holding a lattice still before his face,
 Through which he still did peep as forward he did
 pace." *

Jealousy is marked by a more frowning and dark obliquity of the eyes, as if it said, "I have an eye on you;" with the lowering eyebrow is combined a cruel expression of the lower part of the face.

Jealousy is a fitful and unsteady passion; its chief character is in the rapid vicissitudes from love to hate; now absent, moody, and distressed; now courting love; now ferocious and revengeful; these changes make it a difficult subject for the painter, and it is only in poetry that it can be truly presented in the vivid colors of nature. Even among poets, Shakspeare alone seems to have been equal to the task. Sometimes it may be personified in the face of a mean, suspicious, yet oppressed creature; or, again, in a lowering expression, the body as if shrunk into itself; like that of one brooding over his condition, and piecing out a tissue of trifling incidents to abuse his judgment.

In jealousy the eyebrows are knit and the eyelid so fully lifted as almost to disappear, while the eyeball glares from under the bushy eyebrow. There is a general tension of the muscles which concenter around the mouth, and the lips retract and show the teeth with a fierce expression; this depends partly on the turn of the nostril, which accompanies the retraction of the lips. The mouth should express that bitter anguish which the Italian poet has rather too distinctly told:

"Tremava il cor dentro, e tremava fuor le labbia,
 Non può la lingua disnodar parola,
 La bocca amara e par che toco v' habbia,"

Again:

"E per l' osea un tremor freddo gli scorre,
 Con cor trafitto, e con pallida faccia,
 E con voce tremante, e bocca amara."

There seems to be a natural succession in the passions of rage, revenge, and remorse; I do not mean morally, but in regard to our present inquiry concerning the traits of expression. A slight change in the lineaments of rage gives the expression of revenge, while the cruel eye of revenge is tempered

by the relaxing energy of the lower part of the countenance in remorse.

Rage is that excess or vehemence of anger that can be no longer restrained—*sava animi tempestas*. Whether the object be near or remote, the frame is wrought and chafed. It is a brutal passion, in which the body acts with an impetuosity not directed by sense. If we observe it in a beast we shall better recognize it in man. When the keeper strikes the tiger or the wolf with his pole there is an instantaneous fire of expression; the eye, the teeth are in a moment exposed, and accompanied with an excitement of the frame which we can not see unmoved. If we imagine the human brute strangling helpless age or infancy, it must be with such a rage as this. Lord Kames says, "A stock or a stone by which I am hurt becomes an object of resentment, and I am violently incited to crush it to atoms." This is purely as the wolf bites the stick which is presented to him. In considering those bursts of passion which lead us to wreck our vengeance upon inanimate objects, Dr. Reid supposes we are possessed with the momentary belief that the object is alive: "There must," he says "be some momentary notion or conception that the object of our resentment is capable of punishment." I believe the mistake here is in not having a confirmed notion of the intimate connection between the emotion in the mind and the exertion of the bodily frame. The body and limbs suffer an agitation as the face does, resulting from the passion, and if a man, half-conscious of the frenzy which possesses him and afraid of being betrayed into an act of cruelty, flings from him the weapon of destruction, it is with the jerk and impetuosity of an outrageous act; while his humane sense controls him, it is not capable of arresting that instinctive agency of the body wrought upon by the passion; just as a man, after a long exercise of patience in some work of delicacy or nicety, is at last overcome, dashes the instrument from him and relieves himself by a burst of impatience and some angry strides.

In rage the features are unsteady, the eyeballs are seen largely, they roll and are inflamed. The front is alternately knit and raised in furrows by the motion of the eyebrows, the nostrils are inflated to the utmost,

* Faery Queen, Book III. cant. 12, v. 15.

the lips are swelled, and, being drawn by the muscles, open the corners of the mouth. The whole visage is sometimes pale, sometimes turgid, dark, and almost livid; the words are delivered strongly through the fixed teeth; "the hair is fixed on end like

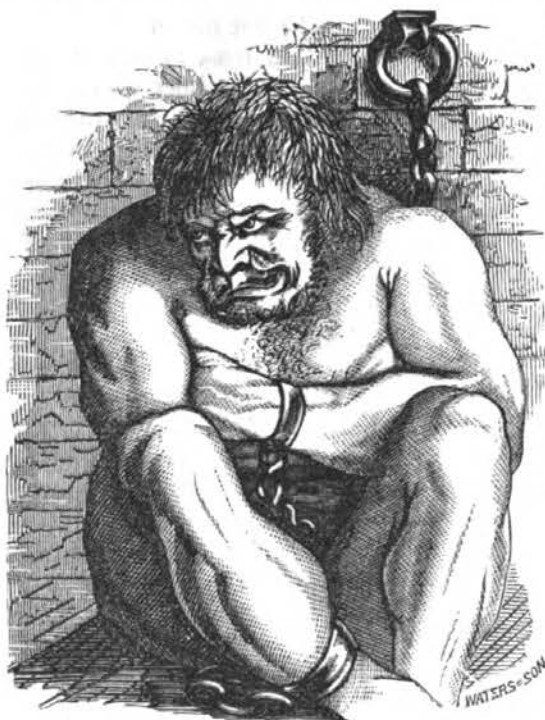


FIG. 4.—THE MANIAC.

one distracted, and every joint should seem to curse and ban."*

Tasso thus describes the rage of Argante :

" Tacque ; e 'l Pagano al sofferir poco uso,
Morde le labbra, e di furor si strugge.
Risponder vuol, ma 'l suono esce confuso,
Siccome strido d' animal, che rugge :
O come apre le nubi ond' egli è chiuso,
Impetuoso il fulmine, e sen fugge ;
Così pareva a forza ogni suo detto
Tonando uscir dall' infiammato petto."

Cant. vi. 38.

But in representing the passion it may be much varied; perhaps the eyes are fixed upon the ground; the countenance pale, troubled,

* "La furia fa gl' atti stolti e fuor di se; si comme di quelli che si avvolgono ne i moti offensivi, senza riguardo alcuno, rendendosi vehementi in tutti gl' affetti, con bocca aperta et storta, che par che stridano, ringhino, urlino et si lamentino, stracciandosi le membra et i panni et facendo altre smanie."—LOMAZZO, lib. ii. p. 135.

If the painter has any imagination and power of delineation, the reading of the combat of Tancred and Argante must inspire him with a grand conception of the sublime ferocity of the human figure in action.

and threatening; the lip trembling and the breath suppressed, or there is a deep and long inspiration as of inward pain.

In the following sketch I endeavored to represent that expression which succeeds the last horrid act of revenge; the storm has subsided, but the gloom is not yet dissipated. Some compunctious visitings of nature are in the lips, though the eye retains its severity. By the posture and fixed attention I would indicate that the survey of the now lifeless body carries back the train of thought with regret for past transactions.

To represent the prevailing character and physiogomy of a madman, the body should be strong and the muscles rigid and distinct, the skin bound, the features sharp, the eye sunk; the color of a dark brownish yellow, tinctured with sallowness, without one spot of enlivening carnation; the hair sooty black, stiff and bushy. Or, perhaps, he might be represented as of a pale, sickly yellow, with wiry hair.

"His burning eyes, whom bloody strokes did stain,
Stared full wide, and threw forth sparks of fire;
And more for rank despatch than for great pain,
Shak'd his long locks, color'd like copper wire,
And bit his tawny beard to show his raging ire."*

I do not mean here to trace the progress of the diseases of the mind, but merely to throw out some hints respecting the external character of the outrageous maniac.

You see him lying in his cell regardless of everything, with a death-like settled gloom upon his countenance. When I say it is a death-like gloom, I mean a heaviness of the features without knitting of the brows or action of the muscles. If you watch him in his paroxysm you may see the blood working to his head; his face acquires a darker red; he becomes restless; then, rising from his couch, he paces his cell and tugs his chains; now his inflamed eye is fixed upon you, and his features lighten up into wildness and ferocity.

The error into which a painter may naturally fall, is to represent this expression by the swelling features of passion and the frowning eyebrow; but this would only give the idea of passion, not of madness. Or he mistakes melancholia for madness. The theory upon which we are to proceed in

* Faery Queen, Book ii. cant. 4, v. 15.

attempting to convey this peculiar look of ferocity amid the utter wreck of the intellect, I conceive to be that the expression of mental energy should be avoided, and, consequently, the action of all those muscles which indicate sentiment. I believe this to be true to nature because I have observed (contrary to my expectation) that there was not that energy, that knitting of the brows, that indignant brooding and thoughtfulness in the face of madmen which is generally imagined to characterize their expression, and which is so often given to them in painting. There is a vacancy in their laugh and a want of meaning in their ferociousness.

To learn the character of the countenance, when devoid of human expression and reduced to the state of brutality, we must have recourse to the lower animals, and study their looks of timidity, of watchfulness, of excitement, and of ferocity. If these expressions are transferred to the human face, I should conceive that they will irresistibly convey the idea of madness, vacancy of mind, and mere animal passion.

But these discussions are only for the study of the painter. The subject should be full in his mind without its being for a moment imagined that such painful or humiliating details are suited to the canvas. If madness is to be represented it is with a moral aim, to show the consequences of vice and the indulgence of passion.

There is a link of connection between all liberal professions. The painter may borrow from the physician. He will require something more than his fancy can supply if he has to represent a priestess or a sybil. It must be the creation of a mind learned as well as inventive. He may readily conceive a female form full of energy, her imagination at the moment exalted and pregnant, so that things long past are painted in colors as if they stood before her, and her expression becomes bold and poetical. But he will have a more true and precise idea of what is to be depicted if he reads the history of that melancholia which undoubtedly, in earlier times, has given the idea of one possessed with a spirit. A young woman is seen constitutionally pale and languid; and from this inanimate state no show of affection or entreaty will draw her into conversation with

her family. But how changed is her condition when, instead of the lethargy and fixed countenance, the circulation is suddenly restored, the blood mounts to her cheeks, and her eyes sparkle, while both in mind and body she manifests an unwonted energy, and her whole frame is animated.



FIG. 5.—FRENZY.

During the continuance of the paroxysm she delivers herself with a force of thought and language, and in a tone so greatly altered that even her parents say, "She is not our child, she is not our daughter, a spirit has entered into her." This is in accordance with the prevailing superstition of antiquity; for how natural to suppose, when this girl again falls into a state of torpor and sits like a marble statue, pale, exhausted, taciturn, that the spirit has left her. The transition is easy; the priests take her under their care, watch her ravings, and give them meaning, until she sinks again into a death-like stupor or indifference.

Successive attacks of this kind impress the countenance indelibly. The painter has to represent features powerful but consistent with the maturity and perfection of feminine beauty. He will show his genius by portraying, not only a fine female form with the grandeur of the antique, but a face of peculiar character, embodying a state of disease often witnessed by the physician, with associations derived from history. If on the dead and uniform paleness of the face he bestows that deep tone of interest which belongs to features inactive, but not incapable of feeling; if he can show something of the imprint of long suffering isolated from human sympathy, throw around her the appro-

priate mantle, and let the fine hair fall on her shoulders, the picture will require no golden letters to announce her character, as in the old paintings of the Sybil or the Pythoress.

OF DEATH AS REPRESENTED IN THE PAINTINGS OF THE OLD MASTERS.

Before proceeding I must repeat that the convulsions of the body which sometimes accompany the act of dying are not the effect of pain, but succeed to insensibility. There may remain, after death, for a time the expression of suffering, but this soon subsides, and the features become placid and composed. Therefore it is that the sorrowing friends are withdrawn until Death has had the victory, when the features assume the tranquillity of sleep.

The observation of Leonardo da Vinci, that contrast is essential in painting, has a fine example in the picture of the "Martyrdom of St. Agnes."* Near the martyr lie two soldiers struck down by a miracle; one of these is in the agony, but not yet dead; the muscles of his neck are convulsed, the mouth extended, and the lips drawn back from the teeth, the brow is furrowed, the eyes almost closed, and the pupils not visible; the other soldier is tumbled over him, his features are fixed in death; with both of these is contrasted the resignation of the martyr.

When in Rome I heard much of the fine statue of St. Cecilia; I therefore went to the Convent of St. Cecilia Decollata. Looking for a statue, my surprise was great when it was pointed out where the figure lay, in a crypt or low marble arch, under the great altar.† A gold case containing the heart of the saint hangs from the center of the arch. St. Cecilia was an early convert to Christianity, and having drawn her brother and many others to the faith she suffered martyrdom, and was found in the precise position in which this marble represents her. The body lies on its side, the limbs a little drawn up; the hands are delicate and fine, they are not locked, but crossed at the wrists; the arms are stretched out. The drapery is beautifully modeled, and modestly covers the limbs. The head is enveloped in linen, but

the general form is seen, and the artist has contrived to convey by its position, though not offensively, that it is separated from the body. A gold circlet is around the neck to conceal the place of *decollation*. It is the statue of a lady perfect in form, and affecting from the resemblance to reality in the drapery of white marble, and the unexpected appearance of the statue altogether. It lies as no living body could lie, and yet correctly, as the dead, when left to expire—I mean in the gravitation of the limbs.*

The position of the head will distinguish the dead from the living figure. There is so much difference between fainting and death, that is to say, it is so possible to mark the difference, that I confess I have been disappointed by the failure of some of the finest painters; for example, in the representation of the Madonna fainting at the foot of the cross, which is a very frequent subject, the coloring is commonly that of death.†

There is sometimes in death a fearful agony in the eye, but we have said that it is consolatory to know that this does not indicate suffering, but increasing insensibility. The pupils are turned upward and inward. This is especially observed in those who are expiring from loss of blood. It is the *strabismus patheticus orantium* of Boerhaave. Sauvages observes on this rolling up of the eyeball in dying children, "Vulgo aiunt hos tenellos suam patriam respicere." "The vulgar say that these little ones are looking to their native home."

We can not fail to observe how artfully

* *Statua di St. Cecilia*.—"Questa graziosa statua giacente, rappresenta un corpo morto come se allora fosse caduto mollemente sul terreno, colle estremità ben disposte e con tutta la decenza nell'assetto del panneggiamenti, tenendo la testa rivolta all'ingiu e avviluppata in una benda, senza che inopportunamente si scorga l'irrigidire del corpi freddi per morte. Le pieghe vi sono facili, e tutta la grazia spira dalla persona, che si vede essere giovine e gentile, quantunque asconda la faccia; le forme generali, e le belle estremità che se mostrano, danno a vedere con quanta grazia e con quanta scelta sia stata imitata la natura in quel posare sì dolcemente."

† *Gesù Cristo Morto*.—"He lies, the head and shoulders resting on the knees of his mother, who has fainted. The posture and abandonment of the Magdalen is the finest representation possible; her hair, as usual, loose. She is kneeling at the feet of our Saviour, her hands convulsively entwined. The dead body is beautifully drawn, the anatomy perfect, not exaggerated. But the mother is dead—gone to decay—not in faint, but in death; such is the effect of the coloring."—*Note from Journal. Parma.*

* In the Academia delle belle Arte, Bologna.

† In the Church of St. Cecilia in Trastevere.

the poets accommodate their descriptions of death to that kind of interest which they have labored to excite. The tyrant falls convulsed and distorted in agony; the hero, in whose fate we have been made to sympathize, expires without the horrors of death; his fall is described with all the images of gentle sinking, where mortal languor is succeeded by insensibility unaccompanied by pangs and struggles.

In the episode of Nisus and Euryalus, Virgil gives to the death of Sulmo all the horror of violent death; the breath is convulsively drawn and the sides palpitate.

"Hasta volans noctis diverberat umbras,
Et venit aversi in tergum Sulmonis, ibique
Frangitur, ac fuso transit præcordia ligno.
Volvitur ille vomens calidum de pectore flumen
Frigidus, et longis singultibus illa pulsatur."—*Æneid*,
ix. 411.

But in the death of Euryalus the poet recurs to all the images of languid and gentle decline:

"Volvitur Euryalus letho, pulchrosque per artus
It cruor, inque humeros cervix collapsa recumbit:
Purpureus veluti quum flos, succius aratro,
Languescit moriens; lassove papavera collo
Demisere caput, pluvia quum forte gravantur."—
Æneid, ix. 438.

Tasso presents us with some very fine contrasts of the same kind; in the death of Argante, for example, there is a picture of ferocious impetuosity and savage strength:

"Infuriossi allor Tancredi et disse;
Così abusi, fellon, la pietà mia?
Poi la spada gli disse et gli refasse
Nella visiera, ove accertò la via.
Moriva Argante, e tal moria qual visse:
Minacciava morendo, e non languia;
Superbi, formidabili, e feroci
Gli ultimi moti fur, l'ultime voci."—
Tasso, *Ger. Lib. cant. xix. 26.*

Sometimes, indeed, death may be represented unaccompanied with the horror by which it is commonly associated. A young

* In the death of Dardinel the simile of Virgil is beautifully imitated by Ariosto:

"Come purpureo fior languendo muore
Che'l vomere al passar tagliato lascia;
O come carco di soverchio umore
Il papaver no l'horto, il capo abbassa;
Così già de la faccia ogni colore
Cadendo, Dardinel di vita passa," etc.—
Cant. xviii. 153.

As a further contrast, we might take the death of the Soldan's page, *Ger. Lib. ix. 86.* So of Nisus throwing himself upon the body of his friend, *Æneid*, ix. 444. Contrast also the death of Eneas, *Id. xi. 663*, with that of Camilla, in the same book.

creature is seen in death as if asleep, with the beauty of countenance unobscured by convulsion; the form remains, but the animation is gone, and the colors of life have given place to the pale tints of death.

"D' un bel pallore ha il bianco volto asperso,
Come a' gigli sarian miste viole.

In questa forma
Parea la bella donna, e par che dorma."—
Tasso, *Ger. Lib. cant. xii. 69.*

Again the same poet:

"E, quasi un ciel notturno, anco sereno
Senza splendor la faccia scolorata."

Or Petrarch:

"Non come fiamma che per forza è spenta,
Ma che per sè medesima si consuma,
Se n' andò in pace l' anima contenta:
A guisa di un soave e chiaro lume,
Cui nutrimento a poco manca,
Tenendo al fin suo usato costume;
Pallida no, ma più che neve bianca,
Che senza vento in un bel colle fiocchi,
Parea posar come persona stanca.
Quasi un dolce dormir ne' suoi begli occhi,
Essendo il spinto già da lei diviso,
Era quel che morir chiaman gli sciocchi.
Morte bella parea nel suo bel viso."—
Trionfo della Morte.

A man who has died in battle lies blanched and very pale—he has bled to death; but one strangled, smitten, or crushed by some deadly contusion has the blood settled in his face. The following picture is truly horrible from its truth and accuracy:

"But see, his face is black, and full of blood;
His eyeballs further out than when he lived,
Staring full ghastly like a strangled man;
His hair uprear'd, his nostrils stretch'd with struggling;
His hands abroad display'd as one that grasp'd
And tugg'd for life, and was by strength subdued.
Look on the sheets; his hair, you see, is sticking;
His well-proportion'd beard made rough and rugged,
Like to the summer's corn by tempest lodged.
It can not be but he was murder'd here;
The least of all these signs were probable."—
King Henry VI. Part II.

The laws of inquest in England require such things to be witnessed in all their appalling circumstances, since the body lies where it falls, and no weapon or even disorder of dress is removed.

Are such scenes to be painted? Certainly not. The impression may be conveyed to the spectator consistently with good taste, and in a manner less obtrusive, so as to awaken the sensations which should attend them, without the detail of the actual scene.

It may be allowed in words, as Shakspeare has represented the body of the good Duke Humphrey, but in painting the representation becomes too palpable to admit the whole features of horror.

[TO BE CONTINUED.]

SELF-ESTEEM LOST BY AN ACCIDENT.

THE great facts of Phrenology often find confirmation in accidental injury to the brain, or a part of it. Within a few years past we have met with cases recorded in the medical publications of injuries received by persons in the region of the brain over the eyes, the phenomena of which, as stated by attending physicians, have included aphasia, or loss of speech, or incoherent utterance, or weakness of memory, or a general impairment of the perceptive faculties. Not having the opportunity to examine these cases, we have been unable to present a properly digested account of them, but could only infer from the brief diagnosis given that the injury in a particular case affected chiefly such and such organs.

Quite recently we received a letter from Boston which contains much "confirmation strong," in the language of the sufferer himself, with reference to a local injury to the brain. He says: "About two years ago I received a heavy blow on the head with a piece of timber in the very place phrenologists have marked "Self-Esteem." It made a cut an inch and a quarter in length. I have often wondered that it did not break my skull.

About two or three months after I began to be very much troubled with the above disease. Although I was a little inclined that way before, yet I look back to that time as the dawn of a dark and terrible era in my mind. And yet I am not able to decide which is the real cause, the wound or my natural organization; but one thing I am certain of, that I never had any trouble before the accident to be compared to what came upon me like an armed man two or three months afterward."

It seems clear enough to us that the accident greatly impaired, if it has not destroyed, the functional activity of the organ of Self-Esteem. To have withdrawn suddenly the very important aid which this organ contributes toward rendering character self-reliant, steady, and confident is a serious deprivation. The loss of any organ can not be supplied, although it may in a degree be compensated by increased activity in others. So, while Firmness, Continuity, Conscientiousness, etc., may not fill the vacancy of Self-Esteem, they may, nevertheless, be quickened into such efficiency that the character shall be really improved in tone and consistency, and its practical results on the life of the man be evidenced in a more correct deportment and a more successful conduct of business.

In this case, however, the organ may recover much of its former strength, although some time has elapsed since the accident. Such is the possibility. "While there's life there's hope." In the meanwhile, the mental experience of the person is exceedingly interesting from the scientific point of view.

Department of Physiology—Our Sanitarium.

The truths of Physiology should be inculcated and enforced early and earnestly, and with the emphasis of high religious duty.—*Yonatan.*

PREPARING FOR THE CHOLERA.

BY R. T. TRALL, M.D.

IN the years 1832, 1849, and 1854, the Asiatic or spasmodic cholera prevailed epidemically in the United States. In other years it has appeared endemically in several places, and in every year since 1832 there have been a few spasmodic cases. The sum total of mortality, taking all times and places in its history and all modes of treatment, is very nearly one-half the cases. Perhaps we should not wonder that, when deaths from cholera count a score or more per week, the people are alarmed and

many flee panic-stricken from the cities where it prevails.

But more children die of cholera infantum every summer, and more adults die of consumption every winter, than have ever died of cholera during a whole year. Moreover, these diseases are as constant as the seasons, while the cholera only appears at distant and uncertain intervals. Yet we are not alarmed about cholera infantum. We never try to run away from consumption. We have got used to these

greater pestilences, and have come to regard them as unpreventible maladies, if not as second natures or special providences.

Two wrongs, however, never make a right. If we can not understand, nor cure, nor prevent, and will not study, cholera infantum or consumption, it does not follow that we should disregard prophylactic measures in relation to the "blue disease."

For nearly two years the indications of a wide-spread cholera pestilence have existed in the East. Now it is prevailing in Russia with more than ordinary malignancy. In Moscow there have been eight deaths to one recovery—a ratio perhaps unprecedented.

Some persons have remarked that epidemic cholera is usually preceded by the extensive prevalence of small-pox. If small-pox has anything to do with it we had enough of that last winter and spring. Other persons have thought that an extraordinary prevalence of cholera infantum is one of the premonitory signs of epidemic cholera. If this be so we have enough of the infantum to insure the epidemic. Yet others have observed that the potato disease has immediately preceded a visitation of cholera; and just now we are told that the potatoes are rotting in England, and, to cap the climax of dubious prognostication, some have imagined that battle fields with terrible slaughter have some influence in producing a cholera pestilence. And the recent Franco-Prussian war is all we need refer to under this head.

These may be idle speculations. It is true, however, that certain diseases which destroy or eradicate from the system some kinds of poisons or impurities create others which induce, when the circumstances are favorable, other forms of disease. Thus yellow fever does not cause yellow fever in attendants and nurses, unless they are exposed to the original causes, but the morbid excretions of the patient may occasion some other or a similar disease. Like produces similar, pathologically, whether "*similia similibus curantur*" is wise or otherwise, therapeutically.

From an elaborate report on the "Recent Diffusion of Cholera in Europe," by Mr. John Netten Radcliffe, we learn that the present epidemic (which some writers suppose to be the reappearance of the smouldering epidemic of 1866) appeared first in Southern Russia in 1869, in Moscow in 1870, and during the year in several other parts of the Russian Empire. During the year 1871 it appeared in Siberia, Poland, Germany, Sweden, Asia Minor, Con-

stantinople, and in Arabia along the Euphrates and Tigris. In all of these places the successive appearances of the disease have followed the main thoroughfares of travel.

The earliest records of the cholera pestilence present a history not unlike that of the prevailing one. Though long known in India it did not attract the attention of the medical profession generally until 1817. It then "broke out" at Bengal, and from that point extended over the principal nations of the earth. Until 1880 it was confined to the countries of Asia; but in that year it appeared in Moscow; in 1881 it appeared in St. Petersburg, Warsaw, Dantzic, Berlin, Hamburg, and on the north-eastern coast of England. Early in 1882 it appeared in Paris and London; in June at Quebec and Montreal, and soon in various places in the United States from the Atlantic coast to the Mississippi valley. The first case in New York occurred June 24, 1882; and in July following, although the death-rate was considerable less than during the late "heated term," the "mortality was frightful." The disease prevailed in this country to some extent during the years 1833 and 1834.

In 1847 the disease again appeared as a malignant epidemic in India, and its prevalence and history were quite analogous to those of the epidemic which appeared in Moscow in 1880. The first cases in the vicinity of New York occurred at Quarantine, Staten Island, December 1. But it did not extend beyond the quarantine grounds. Soon after this time the disease appeared at New Orleans and several other Southern cities, but did not extend north of the Alleghany Mountains. But in the beginning of May, 1849, it appeared in New York, and soon after in Philadelphia. This epidemic of 1849 was more wide-spread on the American continent than that of 1832, reaching to New Orleans, Mexico, California, and the West Indies. It did not appear in San Francisco and Sacramento until October, 1850.

The epidemic of 1854 was less extensive than either of the preceding ones, but its history is similar.

Shall we have the epidemic repeated in 1873, or sooner? The chances are against us. The English journals are sounding the note of alarm. According to all precedents it will be there soon; and as the Atlantic Ocean has not kept it from us heretofore, it is not safe to rely on it to do so hereafter. It is well to prepare for the cholera, for if it does not come our labor will not be lost. Everything that the strictest hygienist and most rigid sanitarian

can do to guard against the cholera, in himself or in others, is conducive to health—"the great want of the age," as the SCIENCE OF HEALTH truly says. And there is no absolute security against the dreaded disease except in the possession of sound health. Before any person can be "attacked" with cholera (to employ a common but very absurd term) he must have acquired a predisposition. And this predisposition is the effect of bad air, or impure water, or improper food, or personal uncleanness, or stimulating drinks, or narcotic quids, snuff, or segars, or poisonous drugs, or enervating dissipation, or of two or more of them.

City inspectors, boards of health, and municipal authorities, can do much in the way of "warding off the pestilence." They can suppress nuisances, clean the streets, disinfect the gutters, open the sewers, remove dumping grounds beyond the city limits, quarantine vessels from infected ports, and stop the sale of swill milk, unripe fruits, rotten vegetables, and putrid meats. And these measures, if faithfully executed, will save scores of lives, cholera or no cholera. One or two hundred persons are dying every week in our commercial metropolis because these things are not done. If half that number should die next week of cholera, wouldn't there be a panic!

The moral of the cholera is hygiene. The greater work of purification lies without the purview of the constituted authorities. It is that which the individual can do for himself, and which no other one can perform for him, *nolens volens*. Whatever may be the remote causes of cholera, and wherever and however they may originate, the real predisposition is in the blood; and the essential condition of bad blood is deficient excretion; and the principal predisposing condition of deficient excretion is constipation of the bowels. If the bowels are kept in a normal condition it is next (I believe quite) to impossible to have the cholera.

While it is important to keep the depurating function of the skin active by occasional bathing, it is of vital importance to maintain the normal action of the bowels. But this must not be done by purgatives; they would only make a bad matter worse. It only requires a dietary which is in itself not constipating. Plain vegetables, good ripe fruits, and wheat-meal bread are the essentials.

Many physicians recommend stimulants, cordials, "stomachics," astringent medicines, and constipating food as preventive measures. No greater mistake was ever made. The theory

on which this practice is recommended is, that the *cholérine* or premonitory diarrhea is the essential cause of all the danger. If this is prevented the patient will not, can not, have the cholera. The logic is good, but the premise is bad. Cholera does not consist essentially in discharges from the bowels. It is not mere diarrhea. Not one in a hundred dies of diarrhea, with or without medication. Cholera is as different from diarrhea as typhoid fever is different from epileptic fits. Diarrhea is an effort of the vital organism to expel impurities or irritating matters from the bowels. Cholera is an effort to deterge impurities or irritating matters from the whole mass of blood through the channel of the bowels. This is why the disease is so dangerous, and this is why the disease is so empirically and so unsuccessfully treated. The discharges may be checked; the *cholérine* may be arrested; this is only a question of dose; opium and brandy will do it. But then what? The patient dies of narcosis or consecutive fever. There is a rush of blood to the head, and the brain becomes fatally engorged. This brain-affection does not happen in cases of diarrhea. It is because the mass of blood is foul that stimulants and astringents are so injurious.

No physician feels alarmed in an ordinary case of diarrhea. He fears nothing but temporary debility as the result of the remedial effort. However painful the process may be, there is seldom danger. But when his diagnosis is cholera, his prognosis is unfavorable. He calculates that a majority of his patients will die, despite all the resources of his healing art. Prof. George B. Wood, M.D., of Jefferson Medical College, Philadelphia, says, in his "Practice of Medicine," "The plans of treatment which have been employed in epidemic cholera are almost as numerous as the combinations of which remedies are susceptible; and, judging from the reports upon a great scale, there seems to have been little difference in the results; for the proportion of deaths has generally varied from one-third to one-half, no matter what was the locality or what the means of cure resorted to.

This is a fearful statement. And it seems that the nature of the disease is misunderstood and the practice is purely experimental.

Why is the cholera more dangerous than a simple fever? I have already indicated the reason, but it will appear more obvious after adverting to a law of pathology, nowhere taught in medical text-books, but true nevertheless: *Diseases are more or less dangerous, as*

the remedial effort is more or less determined to one part or organ. Keeping in mind the principle that disease is not an entity (the cholera does not "travel" from place to place, nor does it "attack" persons) but a remedial process or effort—an attempt to purify the body—we shall be able to apply the law above stated to an explanation of the phenomena and nature of cholera. If the remedial effort is made equally to all of the excreting organs—the outlets of the system—each part will do its proportionate share of the duty of purification, and no part will be destroyed or seriously damaged. This is the case in the milder forms of fevers; and this is why they are never dangerous. If the effort is made mainly in the direction of the surface, the patient is always safe (unless the medication kills him), for the reason that the cutaneous emunctory is the largest depurating organ of the body, and can perform a disproportionate amount of duty with little damage comparatively. But when the remedial effort is *from* the skin there is danger; and when, as in the case of cholera, the whole attempt to purify the mass of blood is in the direction of one organ, and that the alimentary canal, the damage is very great. The bowels are intensely congested, their vessels engorged, and disorganization and consequent death are imminent.

From this explanation the correct principle of medication must be obvious. It does not consist in constringing the bowels, nor stimulating the blood-vessels, nor blistering the surface, nor calomelizing the liver, nor injecting salines into the blood, nor narcotizing the brain, nor stupefying the nerves, nor chilling the stomach with ice, nor refrigerating the already freezing patient with ice-bags to the spine, but simply in restoring circulation to the surface. If this can be done, the patient may recover; if not, he will certainly die.

In no other disease is the remedial effort so completely localized. Witness the blue, dry appearance of the skin, the haggard features, the coldness of the tongue, the muscular spasms, the running off of the semen of the blood through the bowels, the internal heat or burning sensations, the diminished respiration, and the pulseless wrist. All of these symptoms indicate determination of blood and nervous energy from all parts of the body to the bowels. The pressure on them is too great, and no wonder they are disorganized—death of the other organs following.

Should the cholera *take passage* on some of the transatlantic steamers for our shores, or "break out" among us unheralded, I may have something to say, more in detail, with regard to its proper treatment.

WATER, PURE AND IMPURE

ONE of the prolific sources of disease is the impurity of water. Speaking in a general way, without aiming at chemical exactitude, impurity of water is produced in several ways, among which are the following:

1st. By noxious vapors which float in the atmosphere, such as smoke and other chemical vapors. These contaminate the otherwise pure rain water, especially at the commencement of a shower. Those who use cistern water to drink and for cooking should not permit the beginning of the rain to flow into the cistern, but should allow the water to run to waste until the smoke and other noxious gases which are floating in the air, and also the smoky and dirty condition of the roof, shall have been purified by the falling rain. At the end of a half-hour's rain the water then falling will be nearly pure, and if stored in a clean cistern in cold

or cool weather, and the cistern be so deep in the ground, with ample covering to resist the action of the sun, say two feet of earth over the top, the water will remain nearly as cool as well water through the summer. When cistern water is used, the cistern which for the time is serving the family should not receive the water of the summer showers. This should be sent to a separate one for ordinary uses. Clean rain water, in a deep, large cistern, will become settled so that the water will be as clear as crystal and cold as that of spring or well.

2d. Water is rendered impure by decomposing organic matter, either animal or vegetable. Surface water from fields and forests is strongly impregnated by an infusion of vegetable matter, which, being exposed to the influence of the sun in hot weather, is rendered detrimental to health. If a pond or

swamp dries up or becomes stagnant, bilious and intermittent fevers prevail, sometimes for miles around, to the ruin of the constitution if not to the death of the people.

8d. Water which appears clear, bright, and sparkling, with none of that yellow or reddish tint and offensive odor which pertains to surface or stagnant water, may be impure from the mineral substances which are held in solution. The more common and abundant of these is carbonate of lime, which is precipitated on the sides of the vessel in which the water is boiled, constituting the *fur* of the tea-kettle and the *crust* of the boiler. This kind of water is called hard. Every river is made up of surface water and springs, and carries decomposing organic matter, and many of them running over limestone regions carry so much of lime and other mineral matter as to be *hard*. The Housatonic River, in Massachusetts, is too hard for use by fullers and dyers.

Over the great Kentucky, and a part of Ohio, limestone region the water of the rivers and springs, as well as the wells, is hard, and strangers are seriously affected by its use, until they become accustomed to it. In all limestone regions with which we are acquainted, where vegetable growths have all the lime they can take up and the water carries carbonate of lime in solution, the people and the animals are amply endowed with bone, and are larger and taller than elsewhere in regions deficiently supplied with lime, the bone-making principle.

Rain water which percolates through all sorts of soil and earth, becomes, during its passage, more or less impregnated with the salts or minerals contained in the earth and rocks, and when it comes to the surface it may be so highly charged as to be called a "mineral spring" of some sort, or it may be hard in a greater or less degree like well water.

A gallon of Croton water, with which the City of New York is supplied, contains of

Carbonate of lime.....	1.59 grains.
Sulphate of lime.....	.44 "
Chloride of calcium.....	.90 "
Chloride of magnesium.....	.84 "
Carbonate of magnesia.....	.84 "
Solid matter.....	4.70 grains.

One gallon Thames River water, which supplies London, contains of solid matter over 19 grains, or more than four times as much as the Croton.

The water of the Mississippi and also of the great lakes is not quite soft. In the collection of such great bodies of water some of it must come from springs where mineral deposits give off their qualities in solution; or it flows over limestone and other mineral substances. As these mineral elements are carried from the land to the sea, and are not evaporated into the air as the sea water is, thus becoming fresh to take up and bring down to the sea again other mineral matter, the sea is becoming more and more charged with salts of various kinds, is becoming saltier, so to speak, every year. The Dead Sea in Palestine having no outlet, and the river Jordan and other streams flowing over a country rich in mineral matter and bringing their deposits, the water has become so charged that it is exceedingly pungent and bitter to the taste, and is so heavy that it is said a man floats on its surface like pine wood on fresh water. The difference in the specific gravity and, consequently, in the buoyant quality of fresh and salt water is illustrated by the fact that a vessel loaded in a fresh water river will rise a foot or more when it comes into salt water. Boats loaded with coal in river or canal to the water's edge will stand a foot out of water when they come to tide water. If loaded as deeply in tide water they would sink as soon as they were sent into the lighter fresh water.

Let us now bring this subject to a practical application.

In the great alluvial West, where the surface is comparatively flat and the vegetation very luxuriant, the water becomes impregnated with the decaying vegetable matter, and as the water lies for a considerable time upon the surface, the soil not quickly absorbing it, it becomes sometimes almost as red or yellow as coffee as it lazily creeps along in the small streams.

Farmers of small means find a place they call a spring where the water has been perhaps a foot under ground and then comes to the surface and makes a little rill; but this water is not pure. Some dig a well a few feet deep, but they strike no spring; the surface water percolates into it, and is used by the family. It has a dirty taste to those who are not used to it; the result is fever and ague, bilious complaints, and many forms of

ill health. If men would construct cisterns as already mentioned, they might have wholesome water the year round, and a world of trouble and sickness might be avoided.

DISTILLING STOVE.

We have, however, entertained a pet project for the last twenty years, not that we expect to carry it out and make a hundred thousand dollars ourselves by it, but whoever will do it will make all the money he needs. Our project is this: let there be a cooking stove so constructed that water can be distilled. Then rain water or any other, from a puddle, brook, or pond, or brackish well, or sea water, might be used, and the fire which warms the house and cooks the food can be made to distill all the water the family might require for cooking and drinking. This apparatus should be so constructed as to be simple, easily attended, not liable to accidents, and not to increase the cost of the stove more than ten or fifteen dollars. It can be made larger and more elaborate for hotels and large families, and the extra expense would, in such cases, be easily borne.

Who will put his wits to work to make this invention, thereby securing a fortune

and ministering to the health and happiness of millions of human beings?

Some fifteen years ago we wrote and published an article respecting the need of a lawn mower, saying there was \$100,000 in it if properly developed. In a few weeks after drawings, rude in conception, ruder in execution, and rudest in description, began to be sent to us claiming, what the inventors considered, the prize we had offered, and asking when and how we would send the money. Now the market is filled with lawn mowers of excellent quality and usefulness, and the \$100,000 are distilling into the pockets of their inventors, and the people are benefited. We do not offer a reward for a water-distilling stove any more than we did for the invention of the lawn mower, but we think there is money in it, and also abundant blessing for millions of our countrymen. Who will study and work out the invention, and, while thus doing good, get abundantly paid for it? A cheap invention to give to the great West pure water in every house would be worth to the nation more than a sum equal to our national debt. Who can estimate the health of an empire in money?

Department of Our Social Relations.

Domestic happiness, thou only bliss
Of paradise that has survived the fall!
Thou art the nurse of virtue.

CHILDREN'S RIGHTS.

BY MRS. JULIA A. CARNEY.

AMID all the hubbub there is made now about men's rights, women's rights, patent rights, and political rights, I wonder if any one could, in some lull of the clamor, get a word in edgewise about children's rights?

It is needed very much, and I have a mind to try, although a full discussion of the subject would fill a volume. Our much boasted nineteenth century is nearing its close. It has been most emphatically an age of progress and of right. Let it not pass away without doing as much for its little ones, the children of a civilized community,

as it does for its dumb animals and its far-away heathen.

Our own country needs missionary labor as well as Barboologha. Does this seem an unfounded assertion?

In the July number of *The Science of Health* I find the following corroborative words: "Our cities are to-day swarming with juvenile vagabonds who have no prospect in life but as paupers, criminals, and drunkards. Who cares for them?"

Yet the editor probably did not include the army of little martyrs inclosed by the brown walls of Fifth Avenue, who, in many

respects, need our commiseration as much as those of Five Points.

The sweet poet has sung truthfully :

"The store-house of the grasshopper
Is his by nature's sacred right."

' The philanthropist is forcing upon the world the more prosaic truth, that immunity from needless suffering is the right of every creature God hath made. Yet how many of us are thoughtfully, wisely caring for the children? One class of reformers is poring over the census tables, and blaming another class of reformers who have no more to do with the matter than themselves, because overworked American mothers do not add to their own toils by bringing into the world a larger number of the children of tobacco-steeped fathers. For most of our American mothers *are* overworked, whether rich or poor. Fashion is as hard a mistress as poverty, and our large middle classes have perhaps the hardest work of all to equal with their slender means the dress and style of living of the wealthier.

"Who cares for the children?" was the question!

Mormonism and Communism are each caring for them, but they are attempting entirely antagonistic results, and striving for those results through a sacrifice not only of Scripture teaching but of the highest and holiest emotions of the human heart.

The police care for them, sometimes with tenderness that seems foreign to their office, but they have no power until the law is infringed, and then the law must be satisfied at whatever cost of human souls.

The religionists care for them! All over the land we hear of children's revivals, and "The Sight of Hell" is sold for a penny as juvenile reading. Yet the concentrated agony occasioned to a youthful mind by either of these influences is probably greater than all the suffering of the brute creation from the day they were named of Adam until now. For is not the soul more than the body? and the heir of immortality more than the beast that perisheth? Yet, where are our humane societies for the children?

The following item has been quoted approvingly by many of our papers:

"The New London (Wis.) *Times* reports that a girl in that place, thirteen years of

age, committed to memory 1,100 verses of the Bible in a single week."

Another mentions the awful depravity of a boy who, having been cheated with the promise of a new book into cumbering his memory with a vast number of unappreciated verses, was presented with a volume over whose erudite dullness his grandfather would have gone to sleep. The little fellow indemnified himself for the loss of his play-time by selling the book and purchasing with the proceeds a good stock of peanuts and confectionery. When I read this item, neither twenty years as a minister's wife nor a constitutional aversion to slang phrases restrained the exclamation, "He's a brick!"

There seems to be a prevalent idea among the mass of men and women that children have no rights that an adult is "bound to respect." This is a fallacy. What do we mean by "natural and inalienable rights" if they are not inherent in our very nature?

If, then, we accept the definition of the time-honored Declaration, those rights are "life, liberty, and the pursuit of happiness." Admitting this, where does it lead us?

If children are entitled to life they are entitled to the highest order of life possible to humanity. For this that life must have a pure source. Its parentage must not only be pure before the law but before God; and pure not only from unchastity but from every other sin. There are many who will add with me, pure also from luxurious living and the poisonous drugs which are taken as an expiation of the fault; pure from the disgusting trio, alcohol, tobacco, and swine; baptized daily with God's own trinity of health, pure water, air and sunshine!

For this the mother must not grudge the time spent in ennobling a life which is eternal. She must not deem it a meritorious thing to toil over brodered seam and ruffled flounce that her own or the little one's garments conform to the last freak of fashion, while the new book is unread, the choice picture unpurchased, or the glowing sunset unseen. For all these things not only decide what your child's life shall be but what shall be your future fitness to guide that life.

We shudder as we read of those professional beggars who cripple or starve the stolen child that its deformity and weakness

may be to them pecuniary gain. We ask again, where is the humane society for children? Yet, how much better is the mother who starves her child's higher nature, or dwarfs its physical frame that she may be, like Martha, a model in housekeeping, or, like Eugenie, a leader in fashion?

The second claim is that children, as well as adults, are entitled to liberty. Yet liberty is not to them or to adults lawlessness. The child is amenable to parent or guardian in the same way as the parent or guardian is amenable to his country and his God. Unnecessary restraints and unduly severe punishments are simply tyrannical, by whosoever inflicted. As God has made of us responsible beings, by giving us a free agency, which is yet ruled and overruled by His divine sovereignty, so should we aim to govern the children, allowing to each individual nature the working out for itself in its own way the problem of its own possibilities.

The same is true of the pursuit of happiness, for to be and to do, and to make of ourselves all we feel capable of being, doing, and achieving, is the highest ideal of happiness. The boy who is called by the neighbors "lazy" when working on the farm may out-watch the very stars in his devotion to sciences of which they know or care little. The "dullest boy" in school sciences has

become a Dr. Adam Clark in theology; so also, many another name of which the world is proud was mentioned in the youth of its owner with disparagement by those who held no key to its individual mentality.

There are many minor rights such as courtesy, appreciation, sympathy, encouragement, and a fair judgment of motive, which might be introduced. These, however, are accorded by the truly refined to all, of whatever station, age, or sex; while they are confined by boorishness to rules which vary with place and circumstance.

"Miss A. always says, 'if you please' and 'thank you' to us," said a schoolboy of his teacher. It did not need much knowledge of life to know that she was beloved in her school, or that she would carry the same spirit of Christian courtesy into all her intercourse with others.

When the world learns to be just to its younger members we may hope for a future in which justice may be accorded to all. So long as even mothers, otherwise tender and kind, object to the abatement of severity in modern views of theology because the old ideas "were so good to discipline children," we may expect the soul, terror-lashed in its youth, to retaliate in its manhood.

Many a sin which has startled the world was but the volcanic burst from the long-smouldering fires of previous suffering.

MY WEALTH.

BY ANDREW DOWNING.

I AM not rich in gold or lands;
My home no splendid palace stands,
But with the labor of my hands
I earn my daily bread.

No liveried servants round me wait;
I can not ride in pomp and state
Among the titled and the great—
An humble path I tread.

And yet, a heritage I hold
I'd not exchange for all their gold,
And sounding names, and wealth untold—
Their houses and their lands.

I have a free and kingly mind
That greed of gold can never bind—
An eye that Pride shall never blind
To Duty's high demands.

I have a soul with love imbued
For all the human brotherhood,
Confessing ever, "*God is good*!"
Unwavering faith in heaven;

A faithful compass by my side,
A chart that still shall be my guide,
When wildly o'er the raging tide
My bark is tempest-driven.

I have a lyre that gently flings
Sweet music from its trembling strings,
And stirs the spirit's hidden springs
To kindred melody.

And friendly hands are clasped in mine,
And starry eyes upon me shine,
The while Love's dainty fingers twine
A roseate wreath for me.

If all that heaven hath granted me,
If all these priceless treasures be
The heritage of poverty—
These treasures vast and sure,
If riches be to care allied,
If baseness walks by fortune's side,
If gold begetteth foolish pride—
Thank God, thank God, I'm poor!

THE LAST CASE OF SALEM WITCHCRAFT.

BY B. P. COATES.

ON the afternoon of a clear, bright winter day, in a comfortable mansion on the outskirts of the town of Salem, the master of the house—a fine-looking, middle-aged man, with a frank, open English countenance—stood before the great blazing fire on the hearth buttoning his coat and drawing on his mittens preparatory to setting out on some errand abroad.

His wife, a comely matron, seated in a high-backed chair near the hearth, had been enumerating several new cases of witchcraft and demoniac possession that had occurred in the immediate neighborhood (this was in 1692).

The good woman seemed to feel a little piqued by the incredulity expressed on his countenance, and his comments when she had concluded were not exactly calculated to allay this feeling.

"Pooh! pooh!" said he. "I tell you, wife, I don't believe in witchcraft, and if I chance to fall in with one of these reputed witches this afternoon we'll drink confusion to Cotton Mather in something that, I'll warrant, is to *him* a familiar spirit," and here he slapped his coat pocket, wherein nestled a flask of strong liquor.

"And I tell you, John Stanley," said the good wife, pitching her voice in a key just a semitone above that which is termed silvery. Here I would beg leave to state, for the benefit of my inexperienced readers, that whenever a woman arraigns an offending husband before the bar of her displeasure, or, in other words, lectures him, she usually commences by sounding the culprit's name in full, in obedience to a custom observed from time immemorial, which seems, at first view, to have been originally borrowed from courts of law, but as matrimony is the older institution, I conjecture that the indebtedness is on the other side. "I tell you," said the worthy dame, "that the events occurring in this very town are as deserving subjects of conversation and belief as those stories of English fairies that you are so fond of telling to the children around the fire in the evening. And I shouldn't be surprised," she continued, "if some evil befell you this day as a punishment of your levity in speaking as you have."

John Stanley was a prudent man, and the subject in question was of small domestic importance, so he made no reply; but having completed his preparations he stepped out of the door and on the great ox sled that stood

ready, and was soon urging his team along the road toward a piece of woodland about a mile distant, from whence he was to bring a load of fuel.

There had been a heavy fall of snow a few days previously, and it now lay in huge billowy drifts and fantastic wreaths on the open fields, while the keen north wind swept light particles that glittered in the sunshine in blinding gusts across the road. Yet the north wind only seemed to brace the sinews of stalwart John Stanley, and to blow a ruddier tint of health over his bold countenance, and as it scattered its jewels on his curling locks it seemed rather to be some good fairy showering down diamonds and pearls. But the snow jewels that lay on his chestnut hair were naught to the sparkling fancies and bright memories that danced through his brain, for the north wind brought him thoughts of dear old England, and dreams of Christmas games, and blazing yule logs, and the mistletoe bough—of May-day dances, and waving elms, and stately parks, and summer landscapes crowned with the sunlight's golden glory. It whispered in his ear the tones of loved voices, the low warbling at dawn of birds that nestled beneath the eaves of his childhood's home, and the sound of the peaceful Sabbath bell pealing out from the tower of the old ivy-covered church in his native village. Surely the north wind was a good fairy.

"Ah," mused Stanley, "I'm afraid I was a sad dog when I was young; and when my father bade his wayward son choose between disinheritance or being consigned to the care of his grim Puritan uncle in the colony, and I chose the latter alternative, it was the first time in my life I manifested wisdom. And who would have thought twenty years ago," he continued, "that the wild, rollicking John Stanley could become the staid, thriving colonist, held in respect and esteem by his Puritan townsmen, although they do pull long faces when he happens to let slip a line from 'that profane player man,' as they term Will Shakespeare! Perhaps," he mused, "the key to the mystery may be found in the fact of my having taken to wife a certain demure maiden who has been a faithful helpmate through all the years of our wedded life, and whose gentle influence has sobered my reckless nature and made me what I am. Yes, it has been Mabel's work, God bless her! And I am an ungrate-

ful rascal," thought John Stanley, "if I do not feel richer than an emperor when I think of her and our dear children—my household treasures."

"Diamonds and pearls!" screamed the north wind, "diamonds and pearls! Oho! I'm your good fairy."

Stanley had now reached a point in the road where a lane diverged from it, leading into the depths of the wood. when, just as he turned his team into this path, he heard a harsh, shrill voice call out, "Stop, John Stanley!"

The person addressed checked his oxen and looked around for the speaker. Presently there emerged from the thick bushes on the side of the road the figure of an old Indian woman, wrapped in a tattered red blanket, with an old slouched hat on her head.

Stanley recognized in this personage one who had for some time lain under suspicion of being a witch, but who had hitherto eluded apprehension.

"Well," said he, "what do you want with me?"

"I want liquor," said the hag; "liquor to warm this old body that your talking men have driven out to perish; liquor to give me strength to curse your whole race of robbers and murderers!"

Hére was Stanley fairly entrapped, and he began to cast about for some excuse for not fulfilling his rash vow of hobnobbing with the powers of darkness; but upon a more practical view of the case he came to the conclusion, from the appearance of the old crone, that she had already been supplied with sufficient stimulus for the laudable purpose which she avowed in the latter clause of her remarks, so he intimated as much, at the same time starting up his team to cut short further discourse. As he cast a look back he saw the old woman standing in the middle of the road with her hand raised menacingly, and heard her yell after him:

"I'll make you sorry, John Stanley!"

Perhaps there might have been some superstitious fears lurking in his breast, for he felt relieved when a turn in the road shut him from her sight.

Arrived at his destination, Stanley proceeded at once to his task of loading up, but from some cause, whether the gloom of the forest or the melancholy sound of the wind high up in the somber pines, or from some dim forebodings of impending evil, it is impossible to say, but certain it is he began to be unusually

depressed in mind, and more than once in the course of his work he applied himself to his flask, which became lighter in proportion as the load on the sled grew heavier.

At last, having completed his task, and feeling somewhat fatigued, he seated himself upon the top of his load and commenced his homeward course.

It was now twilight, and as he slowly made his way through the wood there was something so favorable to reflection in the solitude and the deepening gloom, that his mind involuntarily recurred to wild tales of Scandinavian forest deities that he had read in his youth; and it was while occupied with such thoughts that he suddenly observed with a start of unpleasant surprise, to say the least, directly in the path before him the figure of the old Indian witch.

To add to his astonishment, his cattle immediately came to a halt, nor could the utmost exertions with his stick induce them to lift a hoof. At last the witch slowly raised her hand, with the shriveled forefinger pointing upward, whereupon the oxen rising stood erect upon their hinder feet. By this time Stanley felt his courage giving way, and he began to fumble in his memory for a passage of Scripture; but, as in some cases where life is in extreme peril, events of childhood are presented to the mind with the most vivid distinctness, so Stanley's memory, skipping over many a goodly text he had often heard expounded, was rummaging among odds and ends of plays conned many years before.

"Aroint the witch!" he exclaimed at last, in a tone, however, more expressive of entreaty than command.

The old woman, without heeding this exorcism, commenced a whirling motion with her upraised hand, and immediately the oxen began to spin round, taking with them the load of wood and its proprietor. Round and round, faster and faster they flew, and Stanley seemed for a second or so to be in a vortex of horns, hoofs, sticks of wood, and ox-sleds, and then a violent shock bereft him of sense.

When he returned to consciousness, he found himself lying at the foot of a lofty pine, through whose branches the wind swept, making it shudder and moan and toss its arms wildly, like one vexed by an evil spirit. Raising himself into a sitting posture and looking around, he became aware of the presence of a company of strange beings in the form of dwarfs about a foot high, arrayed in fantastic costumes, of which no two were alike in color; and as they

came crowding around him upon his showing signs of returning animation, he noticed that they all wore queer little masks.

"Do him no harm," said one, who appeared to be a leading spirit among these imps, and who was distinguished from the others by a tall red feather in his cap; "do him no harm, he can quote our Will upon occasion, and an accomplishment so unique in this land should commend him to our favor were he the grim-mest Puritan that ever presided at the drowning of a witch. So take courage, friend," he continued, addressing Stanley in a manner that seemed odd enough in view of the relative size of the parties. "Can't give us more of the same text?"

"I think so," said Stanley, who now felt like seeing the adventure through:

"Black spirits and white,
Red spirits and gray—"

"Bravo!" shouted the imp, while a faint sound of applause arose from the diminutive audience.

"Prithee, friend," said he of the feather, "how camest thee by such lore?"

"Oh," said Stanley, with a dash of self-complacency in his manner, "I was a player once, in my younger days."

"A player?" said the dwarf, interrogatively.

"Yes, a—a strolling player."

"Oh!" said the imp, dryly, and "Oh!" echoed the audience in exactly the same tone.

"Associate masks," said the dwarf after a pause, turning to his companions, "permit me to express the conviction that this worthy gent is a complete tile." (The signification of these last two mystical words Stanley was never able to ascertain.) "And further, to propose that in order to entertain our guest in a fitting manner, we make him King of the Revels. Does this meet your approval?"

"Yes, yes!" chirped a chorus of tiny voices. "Hurrah for King John!"

"Very well," said the dwarf; and then turning to Stanley, "will your majesty please wink?"

His majesty complied, and immediately found himself seated in a sylvan chair, formed of the roots of a prostrate tree that had apparently lain in that position a long time, for the trunk and branches were entirely concealed from view by thick shrubs covered with fragrant blossoms, while the part which formed the seat and back was overspread with moss of various tints, and from a projecting point above a vine rich with clustering flowers descended in heavy masses on either side over the twisted projections that served for arms.

From this leafy curtain Stanley peered out curiously, and found himself alone in a strange place.

Instead of gloomy pines and spectral birches he was surrounded by beauteous elms with graceful drooping branches and feathery foliage, while the snow had given place to a carpet of emerald turf, embroidered with white star-flowers and purple bells and violets. The light which illuminated this grove seemed to come from beneath rather than from above, for although it displayed objects within a few feet of the ground with the utmost distinctness, it seemed to fade away and become lost among the foliage that roofed the spot.

As Stanley sat inhaling the soft, balmy air, heavy with perfume, and gazing down a long vista of sylvan beauty that opened before him, he beheld advancing a diminutive train, which he had no great difficulty in recognizing as the company he had met with shortly before, although the appearance of the individuals comprising it was essentially changed.

They had laid aside their masks, and the males of the party (for there was an equal number of both sexes present) were attired alike in a sort of court dress, consisting of a green coat embroidered with gold, a white satin waistcoat also richly embroidered, and pink silk breeches, with white stockings, and jeweled buckles in the shoes. In addition to this, each wore a cap of black velvet adorned with a white plume secured by an emerald clasp.

The females were arrayed in robes of green silk spangled with diamonds, and wore on their heads filets of emeralds.

These particulars Stanley observed as the train approached and formed a semi-circle within a few feet of him; and as one of the number, whom he surmised to be the former spokesman, stepped forward, the truth flashed upon his mind, and he thus addressed him:

"Either I mistake your shape and making quite,

Or else you are that shrewd and knavish sprite

Called Robin Goodfellow!

Are you not he?"

"Thou speak'st aright," said the dwarf, "and, permit me to add, your prime minister for this occasion. Has your majesty any commands?"

"Truly," said Stanley, entering into the spirit of the jest, "methinks, after the fatigues of the forest, a cup would not be amiss!"

"Ho, page!" cried the little minister, "bring

his majesty a dew-drop!" and immediately a tiny page appeared with a massive silver salver, which, by the way, was an English sixpence, and upon it the smallest crystal goblet that ever was dreamed of.

Stanley took off his mittens very gravely and stooped down to take the offering, which he had no sooner touched than it became a tall beaker, containing at least a pint of liquid that he quaffed with evident satisfaction.

"What name does this dew bear, my pretty page?" said the new monarch, condescendingly.

"Mountain dew," was the reply.

"Ah," said the king, smiling graciously, "we have heard of that good drink before. And now," he continued, addressing his minister, "it is our pleasure to sup. Can the royal larder furnish a roasted fowl?"

"Truly, yes," said the elf. "Here! a humming-bird for his majesty."

Immediately there stood before the royal seat a round table covered with a snowy cloth of marvelous texture, upon which the humming-bird being placed, expanded into as goodly-sized a fowl as ever furnished a Thanksgiving dinner.

"Is there aught else your majesty desires?" said the attentive minister, after ample justice had been done to the poultry.

"Pastry," suggested the king, laying down a bone he had finished off.

"Certainly," said the elf. "A buttercup this way!"

"It is our desire," said the monarch, "that the buttercup be of sufficient dimensions to feed our humming-bird."

"Of that your majesty shall judge," said the dwarf, pointing to a yellow flower on the table, which became every moment more and more like a pumpkin pie.

The royal hunger being at last appeased, the table sank slowly down, and Stanley followed it with his eyes until it became a mushroom at his feet, when the minister again addressed him.

"Is it your pleasure that the dancing commence?"

"A goodly suggestion," replied the king; "and, hark ye! we would condescend to open the ball in person provided a partner could be found who is possessed of the magnifying property of our viands."

The dwarf laid his fore-finger alongside his nose in a significant manner, and intimated, in the most delicate terms, that although his majesty was a tolerably well-favored man, yet

there were some circles within which he must utterly despair of ever being admitted; from which remark Stanley inferred that fairies are not altogether free from mortal jealousy. As Stanley, in the character of a spectator, watched the beauteous shapes mingling in the dance, and his eyes, delighted with the sheen of silk, the waving of plumes, and the flash of jewels, lingered on the joyous groups, one by one the figures vanished, and he was alone with his elfin minister.

"The hour of your abdication is at hand," said the latter, "and it only remains for me to give you an explanation of your adventure. Know, then, that my companions and myself, falling under the displeasure of the shrewish Titania, were banished to New England, where, for want of other amusement, we have introduced the practice of witchcraft among the sober Puritans, ourselves assisting disguised as imps. And a merry dance we have led this staid people, although," he added, somewhat regretfully, "with more serious consequences than we anticipated, for human passions need but slight assistance from the supernatural world to work evil. But in a few days the people will recover from this delusion, for the spell is removed; and as our term of banishment expires to-night, we shall return. We belong to other lands and to the past, and the world, in its onward march, will leave behind the toys that amused its childhood. Yes, we belong to the past," he repeated, sadly, "and our race will be forgotten, but for man the fairyland lies in the future."

"Look!" he said, pointing to an opening in the grove; and Stanley beheld, passing like a mighty panorama, the vision of a new world. He saw ports of commerce, into whose laps vessels from every clime poured the treasures of the earth—he beheld magnificent cities crowded with beautiful dwellings, and adorned with lofty spires, and halls of legislation, and temples of justice. He looked at the distant wilderness, and lo! as he gazed, new cities, towns, and villages arose, and fields of waving grain pursued the retreating forest. As he gazed upon the homes of millions of free and happy people, and heard the hum of industry throughout the land, as he beheld fugitives from old, worn-out despotism thronging through the open gates and heard the welcome that greeted them, strange emotions stirred within his breast—tears of joy suffused his eyes, and, tremblingly, he turned to ask the name of this blessed country. But his companion had disappeared.

And now darkness closed around him, a

numbness crept over his frame, and he gradually slid into a state of insensibility.

"Here he is! here he is!" exclaimed a voice. "Bring the lantern this way! Quick! Take that log off his breast. Carefully, now!" And John Stanley was borne on the strong arms of friends to his dwelling.

It seems that Mrs. Stanley, upon seeing the oxen come home without their master, had immediately collected the neighbors and sent them in search of her husband, whom they found lying in the forest half dead from the effects of cold and the injuries he had received.

Many days elapsed before Stanley was able to tell his story to his wondering townsmen. By this time, however, the delusion that possessed men's minds had passed away "like a dream of night," and, consequently, he was never called to recount his adventure before a court. And although there are not wanting in these days matter-of-fact persons to attribute this affair to hard drinking and careless driving, I dismiss this impertinent suggestion with a wave of my pen, and request the kind reader to join with the good people of that period in the belief that the experience of John Stanley was the *LAST CASE OF SALEM WITCHCRAFT*.

VIRTUE IN PUBLIC OFFICERS.

IF virtuous sentiments and conduct are essential to the welfare and success of all persons in private life, they are even more so to those occupying stations of public trust. A great and good man has said: "For if a man know not how to rule his own house, how shall he take care of the Church of God?" So, if a man shall fail to govern himself—in other words, to live virtuously, how can he be expected to govern the people virtuously, or faithfully to discharge the duties of an important office. If he, from want of upright living, do not well attend to his own business, he is not to be trusted with the business of others. A good agent can never be made out of a bad man. Indeed, such a man is bad wherever found, or in whatsoever engaged. He may succeed in a bad business, such as making, using, or selling bad things, but never in the things which are true, honest, just, pure, lovely, and of good report. The officers of our superior form of government, especially those in civil service, are called to the administration of such things, and ought by all means to be good men. Standing at the head of these, our President should be an example to all below him. If the head be sick and the

heart faint, the members can not be well. Such has been the experience of the world until the maxim, "Like priest, like people," is everywhere accepted. No more can we expect water to rise above its fountain than subordinates above their superior.

It is, then, of the utmost importance, as the time for the election of a President approaches, that we, as citizens, wake up to the solemn duty of voting for a wise and good man. He ought to know what to do and how to do it—that is, as Jefferson expresses it, he ought to be capable and honest. If he has always been so in the management of himself and his affairs, if he has studied the genius, the constitutions, and the laws of our Government—State and Federal—and always been found defending the right, then he may be trusted in his administration. Antecedents are of much moment in such a responsible selection. Forever let us ignore the silly blunder of taking a man for that high office without a record. No stronger evidence could be furnished of utter incompetency. If a citizen has said nothing and done nothing politically, it is too much to hope even for a discharge of the vast duties of the Presidential office.

Let us know well what we do in this great matter, that our sacred rights and glorious institutions be preserved.

W. P.

YOUNG MEN, DON'T DO IT!

NO, young men, don't do it! Don't marry dimples, nor ankles, nor mouth, nor hair, nor necks, nor teeth, nor chins, nor simpers. These bits and scraps of femininity are very poor things to tie to. Marry the true things—look after congeniality, kindred sympathies, disposition, education, and if these be joined with social position, or even filthy lucre, why don't let them stand in your way. Get a woman—not one of those parlor automatons that sit down just so, thump on a piano, and dote on a whisper. Living statues are poor things to call into consultation. The poor little mind that can scarcely fathom the depth of a dress trimming, can't be a helpmate of any account. Don't throw your time away on such trifling things.—*Intelligencer*.

[Very good. Now, suppose we tell the girls what to do, and what not to do. To begin with: "Don't marry a man or a thing if he drinks, smokes, chews, snuffs, gambles, lies, steals, swears, or loafa. Marry a healthy, clean, temperate, industrious, intelligent, religious, loving, manly man. Then you may have a husband worth having."]



NEW YORK,
OCTOBER, 1872.

OUR WHOLE COUNTRY.

ENGLISHMEN are pretty proud of their "tight little island," assured of its wonderful richness in soil, in minerals, quarries, fisheries, and manufactories. What other spot of similar dimensions on the earth's surface can boast such a history? England is to-day, in many respects, at the head of civilization. She is, indeed, "mistress of the seas." Every ship, it has been said, steers toward England. By her enterprise, her policy, and her necessities she makes all the world pay tribute. Productions—home or foreign—carried under her flag, are specially favored; shrewd discrimination, by subsidies, etc., is made by her government, which prevents successful competition by outside private enterprise.

The English people are also most fruitful. None multiply more rapidly. None send out so many colonies. Though her island home is small, she has immense possessions in different parts of the world. It is said the sun never sets on her territory. She virtually owns much of the East Indies, all of Australia and New Zealand. She conquered Abyssinia, and is nibbling at Africa, China, and Japan. In 1775 she tried her hand in these parts, with a view to collect taxes from American colonists without representation. Our forefathers declined to "shell out" at her bidding, but most impertinently set up house-keeping for them-

selves, without so much as saying, "by your leave." King George scolded, threatened, and sent a "raff" of red coats to force submission. They didn't succeed. Uncle Samuel gave them notice to quit; and after enforcing his order, by giving them just such a thrashing as they attempted to give the colonists, they were induced to pack up their duds and go home. They never have loved the Yankees since that memorable event. What occurred in connection with our late war shows that. And now she is meddling with our tariff, urging on us what she calls "free trade," by which she hopes to open our ports and fill our markets with pauper-made goods. This would prostrate American manufactories, and place our artisans and mechanics on a par with her poorly fed, poorly clad, and homeless hordes who would, if they could, flock to our shores in thousands, where they now come in hundreds. The masses of the middle class of Englishmen—and English women may be—are our friends, but English rulers and aristocrats are *not* friends to our Government. Between individuals of all nations there may be mutual friendships, but there is no love between different nations. Each must take care of itself or it will go down. Americans must make up their minds to this. We must protect ourselves. We owe allegiance to no foreign power. Our first business is to put our own house in order—to reestablish ourselves as a commercial nation. At present, our shipping amounts to almost nothing. England assisted to burn and sink our merchantmen, and then stepped in with *her* ships to convey us and our productions to other countries at her own prices. Have we not had enough of this? Is it not time that we discriminate by statute in favor of exports and imports carried under our own flag? As in the early days of the republic, let our Government give

notice that, after the expiration of ninety days or so, a certain bonus will be allowed on all imports carried in American ships, and it will not take many years for us to cope with the "mistress of the seas." This would be eminently *just*, and a partial reparation for the damage done us by our competitors.

Such a measure would be the most popular of any yet proposed by any administration, and would lift us up and place us on the ground we occupied before the war. At present, we are but a laughing-stock for the world in the matter of ships and shipping, excepting, however, in the matter of yachts. We need not remain so longer. America is a great country. The United States is a power on land, and should be no less so on the seas. We want a navy worthy the name, and we must have American ships, in which to do our own business. The man who avows himself in favor of this measure shall have *our* support.

With a merchant marine established in all the seas, with our railways, canals, and telegraphs all over our continent, and with home manufactures protected from foreign competition, our farmers busy with abundant crops, our merchants pushing their trade throughout the world, there is nothing to prevent us from occupying the foremost place among all the nations. Legislators, statesmen, citizens, will you, one and all, put your shoulder to the wheel and do your duty? There is the prize! Will you have it?

THE CANDIDATES.

THE PHRENOLOGICAL JOURNAL has published all the portraits and plat-forms of all the candidates put in nomination for President and for Vice-President at the coming election. The JOURNAL did not regard either of the persons named as essentially bad, nor

did it exalt them into saints. It simply told the truth about them, and that, too, from a scientific point of view. The JOURNAL is not partisan, and it presumes all its readers to be possessed of common sense, capable of forming a correct judgment, and of voting, as its editor will, just as each thinks best. There is no use of becoming excited; each partisan may blow and bellow as loud as he can, it will make no sort of difference with those who think for themselves. The best of the candidates of all the parties are far enough from perfect. Still, there is a difference, and we may, without fear or favor, exercise our own choice. If no one be as bad as his opponents paint him, so no one may be as good as his partisans picture him.

Let us vote, not for Daniel Pratt, nor for Mrs. Grundy, who can not possibly be elected, but for the one who, all things considered, may be elected, and will best serve the people. It is not for the *man* we elect that we care, but for the office he fills and the service he renders. We want the wisest and the best. It is lamentable that we *may* be compelled to suffer under incompetent leadership. Still, the infliction would be of brief duration in the history of a nation, and no one man can ruin us, though he may himself be ruined. The perpetuity of these United States is not dependent on any one man nor on any dozen men. A crew may mutiny, but the grand old ship of State they can not sink. The *people* are on guard. No ambitious usurper could for an hour assume supreme authority here. All the officers, military and civil, are simply the *servants* of the people. Let them fill their places meekly. Some of them seem to forget themselves, and assume to be masters instead of servants. The *people* are on the watch. They had better look out!

In deciding whom we will appoint or

elect, it will be well to look first at one's past record :—what sort of a life he has led. Next, at his habits : whether he is clean, sober, and steady, or if he chews, smokes, and drinks. If so, throw him out, or send him to an asylum, hospital, or infirmary, where he may be

treated hygienically and restored to health of body and soundness of mind. Third, is he capable of discharging the duties of the office? Has he character and capacity? Has he decision, integrity, stability? Can he navigate the ship? If so, vote for him.

A COLLEGE PROFESSOR AND PHRENOLOGY.

WE clip from the *Lewiston (Me.) Journal*, an account of Prof. A. S. Packard's Baccalaureate Address, delivered during Commencement week, 1872, at Bowdoin College, which contains the following statement :

"The speaker remarked on the notion of special adaptation to a particular profession as a false one, and urged the point that success will depend, not on any particular gifts but upon individual effort and earnest diligence."

The notice goes on to speak of the "aged Professor," hence it is clear enough that the remark was not an ill-digested ebullition of youth or early manhood.

We entirely dissent from the sentiment contained in the quotation, and are surprised that an "aged Professor" should not have seen enough in his long life to convince him that special adaptation to particular pursuits or professions is not a "false idea." For example, of a hundred students that graduate with average credit from any college, not more than three in ten are well adapted to the position of a professorship in a college to instruct young men. We read in the Scriptures that a bishop should be "apt to teach," as if there were some bishops who were not "apt to teach."

There are men who are themselves good scholars that are not "apt to teach," and hundreds of men could become sound thinkers in law but not good speakers, and they would make a shameful failure were they to attempt oratory. There are many students who are mere fact gatherers but not logicians, and they make a sad failure when they attempt a course of sound logical reasoning; but they would make good editors to gather news and descant upon the facts, but they would write poor essays for a great review.

Some men (and women, too) are born with a natural tendency for the practice of the healing art, and Bowdoin College had students graduating under that baccalaureate who were better fitted for medicine than for anything else; and some who were utterly unfit for medical practice, and yet were good scholars. Some of them would have made good engineers, but would be good for nothing in the pulpit. One might as well say there is no such thing as talent.

The idea of an "aged Professor" telling students that they can do one thing as well as another; all they require is "earnest diligence;" it is preposterous certainly at this age. Is not one more gifted than another in music, in poetry, in mechanism, invention, etc.? The fact that the Professor is aged may be a sufficient reason why he should entertain such antiquated notions, because old men will not learn new things. Not one man in a million will accept a new idea after he attains fifty-five unless it is on some subject which is independent of prejudice and preconceived notions, and which admits of positive demonstration. It has been stated that the only hope of the world's reformation is in the mortality of men.

"Old men for counsel," it is said, but their counsel is available only where precedent is the basis of the judgment; where new ideas are required the most of old men are too fixed, set, and prejudiced, if not bigoted, to adopt new facts. It is said that no physician of the age of forty, who had attained to any eminence when Harvey announced the circulation of the blood, ever adopted that hypothesis, but filled up the balance of his life ignoring, if not sneering at the new idea.

Everybody knows, certainly an old professor

should know, that in every class in college some excel in classics, some in mathematics, some in philosophy, some in that which belongs to history, and that nearly every student runs low in something. Occasionally, one of those full-orbed men, nearly complete in every department of mental life, will rank equally well in every branch of study, and people denominate him an universal genius. If anything is demonstrated by experience and observation, it is that, genius is more or less partial; that there are special talents for particular pursuits; that men sometimes study for the pulpit, influenced by a fond mother or devoted father, or by some extraneous influence; they may acquire the education and enter upon the profession, but fail in its practice, and, perhaps, in poverty, unaided, they work their way to medicine, to law, to engineering, to manufacturing, or to the realm of invention, and secure success.

Many a lawyer graduates with respectability if not with high credit, but he stumbles on for years in his profession, and finally finds his way into business, and makes a fortune. Many a physician does the same, and not a few clergymen have so strong a taste for commerce or speculation that they become secularized and successful. One is a natural mathematician, another of equal general sense can not learn the multiplication table; one sings from the cradle, another never can learn a tune; one is even a bungler with tools, another whittles and builds from early boy-hood; one is eloquent, another can not be trained to be of free and easy speech; they are Moses and Aaron repeated. But Professor Packard would tell us that, "the notion of special adaptation to particular professions is a false one."

But to come back to the class of a hundred students, more or less, of Bowdoin College it may be that they possess average ability on all topics, and that one half of them would succeed moderately well in any one of the learned professions by "earnest diligence" and effort; and though that might be true of half of the class, it was not true of a portion of the other half. We greatly mistake if forty per cent. of the young men who sat before him were not specifically adapted to special professions, and would do a hundred per cent. better in one than in an-

other. But he would teach them to draw their profession as they would a ticket in a lottery, and then by dint of hard labor work their way to success.

If Phrenology has taught anything to the world more than another, it is that nearly every man has some place in which he can succeed better than he could in anything else, and that men are adapted by nature to specific pursuits. One can plan an edifice, but has no skill with tools; another can not plan an edifice but he has skill and facility in the use of tools; can take up almost any tools and use them; but he may not have enough of general planning talent to even get a living in the world, much less lead off and help others to get a living. And we would venture the opinion that Professor Packard is not adapted to the instruction of youth, if he has not at this time of life found out that some have greater facility for one drift of mental action than another, and, consequently, are better adapted, one for a talking profession, another for a philosophical or planning career, and so on. We venture that if a record could be made of the alumni of Bowdoin College, or of any other institution, it would be found that those who have come to any distinction have done so by the manifestation of strong, original, and peculiar gifts, and that those gifts were more or less manifested during their college career. Suppose, for instance, Charles Sumner, Theodore Parker, Horace Mann, James Russell Lowell, and Ralph Waldo Emerson were classmates, it would doubtless be found that one of them was a wit and poet in college; that three of them were logicians, and that one was a dreamy abstractionist, wiser than he knew, yet impractical; while a majority of the others unnamed have followed in the main their own peculiar drift in spite of external influences.

"Poets are born, not made."

Grindstones bring the ax to a sharp edge, but the original steel contains the cutting power; if it do not, the grindstone can never impart it. The school will cultivate and improve all; education *calls out* and polishes, but does not create or impart talent.

The doctrine of Phrenology, and of common sense is: "Let the right man be put in the right place."

WILL YOU VOTE?

THERE are well-meaning men who excuse themselves from participating in the duties and responsibilities of citizenship, and, with Quaker or passive communistic sentimentality, stand aloof lest they become contaminated by "dabbling in politics."

Another considerable class are so absorbed with private business—money-making—that they have no time to assist in the choice of the men to be placed in charge of important trusts. This leaves the field to a few real patriotic citizens, and to the office-seekers and corrupt pot-house politicians, who have no higher aims than personal gain, and who outnumber the better class, and, in too many cases, have it all their own way, defeating the best interests of the State and the nation.

The *Christian Weekly* makes the following excellent remarks concerning our duty in regard to politics:

"We shall not deny that politics is what our contemporaries often call it, 'a dirty pool;' but we do protest that that is no reason why honest and respectable citizens should not approach it. . . .

"So long as honest men leave politics alone because it is a 'dirty pool,' so long will it fester and breed corruption. So long as honest men stay away from the nominating conventions and from the polls, or go to the latter only to carry out the behests of the former, so long politics will be a trade, and offices will be sold to the highest bidders. Whenever honest men go to the nominating conventions or to the polls, to vote only for honest men of whatever party, and against rascals, whatever their party fidelity, then the wire-pullers will begin to pay some deference to their opinions, and the 'dirty pool' will begin to undergo a cleansing. Every man in America that possesses the right of suffrage, votes not only for himself, but also for ten others at least. His vote is more than a privilege, it is a trust. It is his sacred duty to exercise it, and to exercise it not for himself alone, nor for his party, but for his country, and his whole country.

"This journal has no advice to give to its readers respecting parties, platforms, and candidates. But it urges on all Christian men and all good citizens to unite, not in any one party organization, for conflicting parties are essential to the preservation and perpetuity of republican institutions, but in a common effort to cleanse their respective parties from the debasement of a selfish partisanship. The 'dirty

pool' can only be cleansed by a common effort by all honest men; and the result is worth the labor, even if it be a disagreeable one."

This is sound and sensible. We hope all good men will hear and heed. If our free institutions are perpetuated, it will be by virtue of such action as is here indicated. Let every American citizen do his duty.

"CAN I COME?"

AS the season approaches for the opening of our Annual Course of Instruction in Practical Phrenology, persons write us from every State in the Union and the Canadian Provinces asking us about the time, terms, duration of the course, topics of instruction, mode of teaching, amount of talent, previous reading and culture necessary, probable amount of progress the pupils will make, the rank the graduates may hope to take as lecturers and character-readers during the first season, the average earnings of lecturers the first year and afterward, and many other questions, according to the character and attainments of the questioners respectively. In order to cover the ground of all these questions, and many more, we have prepared a circular which, among other things, sets forth an outline of the subjects comprehended in the course of instruction, and also plainly discusses the subject "WILL IT PAY?"

No man, having character and talent enough to be a good phrenologist, can afford to waste his time; and if he devote it faithfully to any pursuit, that pursuit ought to bring the requisite remuneration. We know no man of average talent who has given faithful effort in the line of Phrenology who has not done as well, pecuniarily, as the same talent, worth, and diligence would have enabled him to do in any other respectable or laudable calling.

One of our former students, in writing to us years after his graduation, said, "I can safely say that the best investment I ever made, and the one that did me the most good, was the sum I paid for instruction in your class." We have no doubt this would be truthfully said by any minister, lawyer, physician, editor, teacher, or merchant who should receive our course of instruction.

The truth is, Human Nature is the central and most exalted subject of human study. The naturalist, at public expense and in national vessels, sails over every sea, studying fishes, snails, and bugs, and the world resounds with the greatness of his fame. We respect-

fully suggest that the study of man as far surpasses in utility and dignity the study of frogs and fishes as he is more noble in character and destiny than they, and the same labor, time, and cost devoted to the study and improvement of the human race, would give a reputation much more exalted and enduring, and the results ten times more serviceable to mankind. When the discovery of a tangled bunch of sea-grass freighted with fishes' eggs, floating on the Gulf Stream, is heralded as far as human speech extends, and is regarded a wonderful achievement in science, what fame and fortune ought not to follow him who, by the study of human or animal development, can read the talents, proclivities, and moral status of his human brother, however varied by climate or culture; or place in its proper rank any animal whose dry and deserted cranium may be placed in his hands?

Then consider the usefulness of this knowledge in the domain of education, domestic and scholastic; in the sphere of legislation, law, and trade, and in the thousand avenues of social life, wherein to know the traits, talents, and temper of each man we meet is the key to success, usefulness, and happiness; how every other kind of knowledge pales before this!

In opening the door, therefore, to young men to acquire this most useful knowledge, we do not invite them to a pigmy theme or to a useless pursuit. He who can read a stranger, and point to the vocation best suited, all things considered, for the man or woman to pursue for the benefit of all concerned—in short, to show how each child can best be trained and educated, and to send each to the right trade or profession, and guide the culture of the character to the best results, need not be abashed in the presence of the best and most useful of men. He who, in love to man, can do this, is the peer of the best and most honored, whether the world knows it or not. The more advanced thinkers are becoming disgusted with the old theories of mental science and modes of investigation, and, thanks to the teachings of Phrenology, they begin to see daylight on the subject of mental philosophy. As an evidence of a better range of thinking, with the manly boldness to express it, we insert the following from *Scribner's Monthly* for August:

"**HUMAN EQUALITY.**—Perhaps of all the erroneous notions concerning mind which the science of metaphysics has engendered or abetted, there is none more fallacious than that which tacitly assumes or explicitly declares that men are born with equal original mental capacity, opportunities and educations deter-

mining the differences of subsequent development. The opinion is as cruel as it is false. What man can by taking thought add one cubit either to his mental or to his bodily stature? Multitudes of human beings come into the world weighted with a destiny against which they have neither the will nor the power to contend; they are the step-children of Nature, and groan under the worst of all tyrannies, the tyranny of a bad organization. Men differ, indeed, in the fundamental characters of their minds as they do in the features of their countenances or in the habits of their bodies; and between those who are born with the potentiality of a full and complete mental development, under favorable circumstances, and those who are born with an innate incapacity of mental development, under any circumstances, there exists every gradation. What teaching could ever raise the congenital idiot to the common level of human intelligence? What teaching could ever keep the inspired mind of the man of genius at that level?"

Those who would make Phrenology a profession in such a way as to make its practice an honorable success, and those who, in other pursuits, would avail themselves of its valuable aid, may inclose a stamp asking for a circular entitled, "Professional Instruction in Practical Phrenology," and address this office.

GRANT AND GREELEY.—We have received a stinging letter from a subscriber in Ohio, deprecating our description of Mr. Greeley in our July number, accusing us of being partisan in that statement. If our friend will please rub up his spectacles and get off the partisan mist and dust from them, he will find that we have copied what we published in the JOURNAL in 1847, before Mr. Greeley was thought of for any public office. This we copied both to show what we then thought of him and to avoid any charge of our being now partisan. We then thought what we said of him was true. Perhaps he has changed. If our friend knows better about him than we did twenty-five years ago, perhaps we ought to "go back" on our past statement.

Another friend and subscriber writes very kindly, but regrets that we said of Gen. Grant in the August number, that "no one would claim for him great statesmanship." How many great statesmen have we had? They could every one be counted on your fingers by going once over. Jefferson, Madison, and Alexander Hamilton were the most conspicuous.

Our Ohio friend complains that we called Greeley honest (though it were twenty-five years ago), and here in August, 1872, we say Grant has "honesty, enterprise, kindness, and generosity." We wait for some Greeley democrat to rap our knuckles for this praise of Grant.

We think them both good men, but perhaps it is not safe to say so till after Nov. 5th.

LIFE INSURANCE.—II.

ITS NATURE—COMPANIES—INTERESTING INCIDENTS.

THE extent of Life Insurance is something remarkable, considering how recently it was commenced in this country. In 1840 a policy was issued by the Massachusetts Hospital Life Insurance Company, of Boston, the only life company then in existence in America, which issued only seventeen whole life policies in about thirty years, and is now never mentioned as a life company. In the year 1850 there were 2,929 new policies written by ten companies, of which 1,482—nearly one-half—were by the Connecticut Mutual, of Hartford, Conn., a company organized in 1846. In 1860 the number had increased to 10,502 new policies, written by nineteen companies. The whole number of life policies in force in 1860 was 55,860, insuring \$151,321,229.69.

In the year 1871, the last concerning which we have full statistics, there were 213,489 new policies issued by seventy-two life companies, insuring \$494,902,970. The total premium receipts of these seventy-two companies for that year were \$97,886,671. Their total income, including interest on investments, rentals, etc., in addition to premiums, was \$116,189,419. During that year these companies paid about \$22,000,000 in death losses. The whole number of policies in force at the end of the year 1871, in the companies referred to, was 801,980, insuring the vast sum of \$2,137,141,655.

These are dry statistics, but they serve to indicate the growth and extent of the life insurance business in this country. The figures given are not warranted to be strictly accurate, but are compiled from official returns. To restate it in round numbers, from less than three thousand life policies written in 1850, insuring say seven hundred thousand dollars, the number has grown, in twenty-one years, to an issue of over two hundred thousand policies annually, covering about five hundred millions; while the grand total of life policies now in force is over eight hundred thousand, insuring a sum nearly equal to the whole national debt.

There are a few life companies not included in this statement, whose business is small and of a local character; but, within the six months past, three or four of the younger and weaker companies have transferred their policies to other companies, and withdrawn from business; so that the whole number now actually doing business is about seventy-five. It is a moderate estimate to say that these companies employ

from fifty to sixty thousand persons, including officers, clerks, agents, and solicitors. In some localities the insurance interest largely predominates—as in Hartford, Conn., a city of about forty thousand inhabitants only, which has eighteen insurance companies, including life, fire, and accident, with a capital of nearly eight millions, and with total assets of over eighty millions. Every other man you meet in that city, it is safe to presume, is directly or indirectly connected with the insurance interest.

Closely allied to life insurance, and indeed a part of it, though reckoned separately, is insurance against death or injury by accident. That is all done by two companies, both located in Hartford, the City of Insurance just referred to. One, the Railway Passengers' Assurance Company, confines its business to the sale of insurance *tickets*, running from one to thirty days, each ticket assuring its holder of \$3,000 in case of death by accident, or \$15 a week for disabling accidental injury. The tickets are sold at railway stations for twenty or twenty-five cents per day, according to the class of ticket. In a business of six years that company has sold *about two millions* of insurance tickets, and paid large sums in benefits to the purchasers. The other company, the Travelers' Insurance Company, is the only one issuing general accident *policies*, in terms of one to twelve months. That company insures against death or wholly disabling injury "by violent and accidental means," granting any sum, from \$500 to \$10,000, for fatal accident, and \$3 to \$50 per week for time lost in consequence of non-fatal injury by accident. It has issued over two hundred and fifty thousand accident policies in its business of a little over eight years, and claims to have paid a larger sum in benefits than any other insurance company of its age in the world; and the same company also does business as a regular life insurance company, keeping its two departments quite separate.

With the increased spread of life insurance among the people, have come many attempts to swindle and cheat the companies. On the same principle, or lack of principle, that men think all they can keep out of the tax-list, or get out of the public fund, is so much clear gain, men think it fair game to pluck life or accident insurance companies. The average duration of *sound* lives is the basis upon which

life insurance tables are constructed ; and it is self-evident that if the sick or diseased are to be taken at the same rates, the calculations will soon be upset, and the company driven into bankruptcy. It is, therefore, a consideration of self-protection and safety to the policy-holders themselves, as well as the corporation and stockholders (if any), that the company should insist upon a firm adherence to the rules. The contract being one that shall be terminated only with the termination of the life of the policy-holder, the company is bound to use caution and exercise its discretion in the acceptance of none but absolutely sound lives. To that end a rigid and careful investigation is made, by a sort of cross-examination under oath, and a searching physical examination by a physician. If the insurant answers the questions honestly, and the physician is competent, the company is thus put in possession of accurate knowledge upon which to base its decision. If the insurant chooses to conceal any incipient or hereditary disease, by answers shrewdly contrived or by omitting a part of the truth, and the physician is not sharp enough to detect it, the company is liable to have a bad risk thrust upon it, to be paid for in a few months or years at the cost of the strictly honest policy-holders. A company is itself sometimes in fault. In its eagerness for business it relaxes its rules, slights its examinations, and, for the sake of apparent present success, endangers its future stability.

Any corporation is notoriously at a great disadvantage in contesting a claim, however unjust or fraudulent, before the public at large, or in the ordeal of that not yet exploded American humbug, a trial by jury ; so the field is a tempting one for sharpers and adventurers. One way is for some strong, healthy rascal to personate some one who is diseased and not likely to live long. Then the application and examination appear to be correct, but there is great danger of detection when the inevitable loss occurs. A more dangerous game is played when an agent and physician are in collusion to obtain a policy on an unsound risk. This, however, we believe to be of rare occurrence.

But bolder frauds are practiced, and oftenest attempted on accident companies, because the premium is very small in proportion to the amount insured, and a previous medical examination is not required.

One Valentine C. Spruell, down in Texas, induced Charles W. Mills to take a life-policy of \$10,000 in the Phoenix Mutual Life Insurance Company, of Hartford, and, subsequently,

another policy in the Aetna Life Company of the same city. These policies he persuaded Mills to assign to him (Spruell). Mills was a sailor, and, some time afterward, it was stated that he had been knocked overboard from his vessel, on a dark and stormy night, and drowned. This was in 1869, we believe. A body which floated ashore was duly "identified;" proofs of death were made up, and an attempt was made to collect the money. But it so happened that Mills, the alleged dead man, was found alive and well at Houston, Texas, and put in jail. Spruell was served in the same manner, and that "loss" was not paid. In this case Mills and Spruell were in collusion, and the two sailors who testified to the drowning were hired to do it.

A curious case happened at Eaton, Ohio, in December, 1866. A man named W. T. McFadden rode over to the neighboring town of Lebanon, Dec. 24, and there "died of cholera" within twenty minutes. That evening Frank Richardson drove to Eaton, reported the death to relatives and friends, got a coffin, and returned, refusing to allow an undertaker to assist him. Tuesday morning neighbors came in and found the corpse already coffined, but the lid was not allowed to be removed "for fear of contagion," and the burial took place without waiting for funeral services. Remember this was at Christmas-time, and the disease was "cholera." Suspicion was aroused, and an investigation took place. *The coffin was found filled with broom-corn seed*, and the "corpse," when arrested, was found to be no less a personage than the mayor of that enterprising city. As Frank Richardson rode to jail, next day, in the wagon with the empty coffin, the boys followed, shouting, "Where's your broom-corn seed?" In this case McFadden, *alias* Mayor Abbott, had insurance of \$25,000 in the Mutual Benefit, and \$5,000 in the Connecticut Mutual Life Companies. The agent, Batchelder, the physician, Richardson, and the insured, had formed the conspiracy. The latter was to disappear while the other two published the death and collected the insurance money.

In November, 1865, a man took a widow to wife at Beloit, Wisconsin ; then he took an accident policy of \$3,000 in the Travelers' Insurance Company, of the agent there, signing the name of John H. Sargent ; then the happy couple took their wedding-tour. A few weeks after it was stated that this John H. Sargent was skating on a creek at Pecatonica, Illinois, when he fell into an air-hole and was drowned.

Proofs of death were properly made up, and the company were preparing to pay, when, suspicion being aroused, they made an investigation. To make a long story short, the widow of Sargent sued the company for the money, the case came into court, and the sympathy of the community was with the weeping widow. On the trial it was shown, as "clear as daylight," that the photograph presented of the deceased was the picture of some other man, that the "widow" was the wife of another man, that Sargent was not drowned, that no such person as Sargent existed, and that, in short, his proper name was Henry J. Allen, and he was the chief witness testifying to his own death—guilty not only of a bold and shrewd attempt at defrauding an insurance company, but also guilty of perjury and bigamy.

Then there was the case of Martin L. Bryan, a gallant captain in the late C. S. A., whose property having been mostly cleaned out by Gen. Sherman *et al.*, attempted to make it up, and a little more, from the insurance companies. That was in 1867. Captain B. had procured \$80,000 insurance, of which \$10,000 was in the Knickerbocker Life Insurance Company, the balance in several accident companies—there being a dozen or more in existence in '66 and '67. On a bright morning in June, while out on the river in a boat, he was upset and disappeared. All search for the body was unavailing; and it was currently reported, some weeks afterward, that "the body" had been discovered, floating, and that "the buzzards were pecking" at it. All agreed that the lamented captain was very high-toned—in fact

"No high-toneder could be found"—

and his son, a young lawyer, who prepared elaborate proofs of death and forwarded them to the companies in interest, took occasion to remark that it (meaning his father's drowning) "was one of those unaccountable accidents which, while they are under the superintendence and direction of an All-wise Providence, seem still to be the result of chance, in that they are without assignable cause, controlled by no fixed laws or rules of conduct or action or sequence, and are as likely to overtake the most prudent as the most reckless." But, alas for the high-toned captain! the money was not forthcoming, and in the month of January following *he came home from Florida*.

The foregoing was only amusing in its results. Let us give one that is simply horrible. A man named Joseph Brown obtained an accident policy in the Travelers' Insurance Company, through one of its agencies in Ohio, upon

Angie Brown, a young girl said to be his daughter, and a few weeks afterward their house was burned up, and the poor girl was burned to death in it. The youth of the girl, the circumstances of the fire, and the hurry shown in applying for the insurance money, induced a careful investigation. The result revealed a plot full of horrors. The girl Angie was the daughter of a poor widow in Dayton, who had been induced to live with the Browns for a few months. Proceeding to a retired spot in New Canaan, N. Y., a frame house was hired for one month only. It was given out that the fire occurred by accident, while both the Browns were out for the evening; but it was found that the girl Angie was first *murdered*, then her body surrounded with combustibles, her clothes saturated with turpentine, and the whole set on fire by Brown! Except for the prompt detective measures instituted by the managers of the insurance company, the death would have passed for an unfortunate accident. The Browns were arrested, and the man, Joseph Brown, died on the gallows. His "wife," the accomplice, was released after awhile, and when last heard from was in jail for some other crime.

One more instance must suffice, though the field is a tempting one, and abounds in exciting and interesting incident. This is in illustration of another phase of the drowning dodge. John Smith, a name not unknown to fame, was insured under an accident ticket of the Railway Passengers' Company for \$5,000. The insurance was only for two days, and cost fifty cents. John went in bathing in the Susquehanna River, and, it was said, was drowned. Not only drowned, but "a boy who was with him *saw him drown*, and then carried off his clothes!" Proofs of death were offered, as usual, and payment demanded; but delay was made, an officer put on the scent, and the recalcitrant John was found in Philadelphia, serving his country as an able-bodied soldier of the regular army.

These illustrations ought to show—and many more could be added—that a company which boasts that it has "never contested a claim" may have paid out thousands of dollars that rightfully belonged to its honest policy-holders or stockholders. It is the *duty* of any company placed in guardianship of funds belonging to widows and orphans to resist to the utmost all attempts to fraudulently obtain possession of those funds. Any honest claim is only strengthened by investigation; and, with the sympathies of court, jury, and the public pro-

verbially with the claimants, no respectable insurance company will contest a claim unless it has strong reasons for so doing.

A few words in closing on the benefits of life insurance. It really serves to prolong life rather than shorten it, by removing a burden of anxiety from the head of a family struggling to make his way in the world, but who has not yet secured a competence for wife and children. He is actually *worth* as many thousands as he is insured for, instantly available in case of his death. To a business man who knows that his own sudden death would leave his affairs very much involved and unsettled, though he might actually be worth much money, a life insurance of \$10,000 or \$20,000 removes a load of care, knowing the ready cash would be of incalculable value in settling up his estate, and might prevent a great sacrifice of property.

To a salaried man, or to any man who can save but little out of his yearly income, no other method is so certain and economical to provide a patrimony for his family or dependent relatives. A hundred or two dollars a year put in a savings bank would require many years to amount to any considerable sum; but it will purchase several thousands of insurance, and the whole amount is secure from the first day after the policy is taken.

To the young and single man the system

serves to promote habits of economy and prudence, and the dollars that might otherwise be foolishly spent become, in a few years, a solid business capital.

To the young and impecunious married man, assuming new responsibility without corresponding increase of income, the possession of a life policy makes pecuniary provision for his wife, in case of disaster to himself, a certainty—and accomplishes it, too, by the only means within his reach.

As to its safety and security, abundant testimony to that is given by the thousands of wealthy men, shrewd financiers, careful business men, who have placed large insurances upon their lives. Jealously guarded by the law, and watched over by hundreds of thousands of interested policy-holders, it is at least equal to a savings bank, if not greatly superior.

Our advice, honestly given, is that every man in sound health and of suitable age, should have some life insurance, simply as a *protection*, not as a *speculation*. The poor need it, the rich may. Choose a sound, well-managed company; insure for *insurance*, not for "dividends," "reversions," "return premiums," or any other problematical advantage; buy it for cash, getting lowest rates compatible with *best security*; and when a policy is once obtained, never let it lapse.

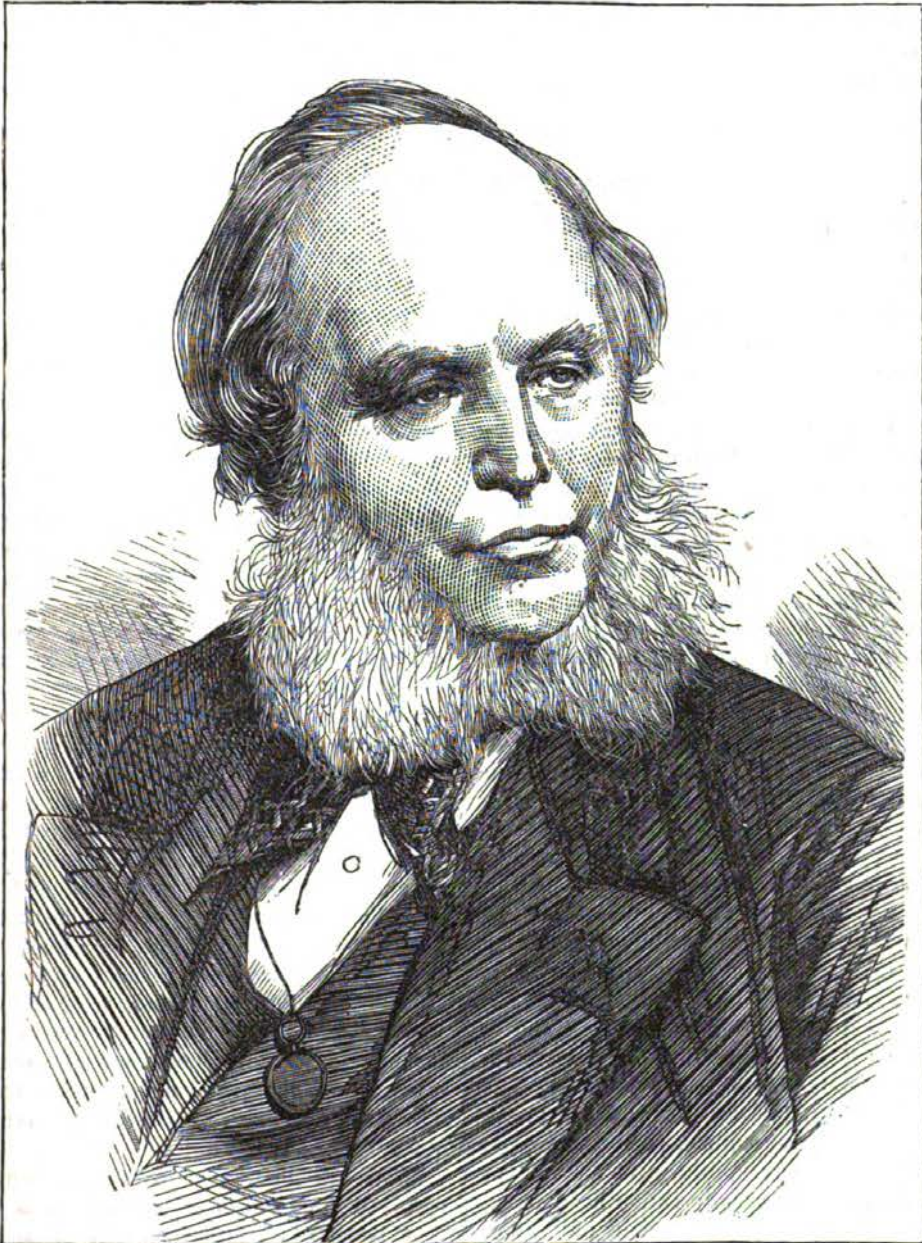
LUMB STOCKS, R. A.

MR. STOCKS, the eminent line-engraver, was born at Lightcliffe, near Halifax, England, Nov. 30, 1812, and was educated at Horton, near Bradford, where also he acquired some taste for drawing, under the tuition of Mr. C. Cope, the father of the present Royal Academy. Mr. Stock's pupilage in line-engraving was commenced under Charles Rolls, in 1827, and on the completion of the term of his articles in 1833, the already skillful engraver was at once engaged by the proprietors of several of the annuals then in the meridian of their popularity. For the "Literary Souvenir," the "Amulet," and the "Keepsake," which are well known in this country, he was commissioned to engrave plates after Stothard, Sir W. Beechey, Caltermole, Herbert, and others. Subsequently he engraved for Finden's "Royal Gallery of British Art" the picture by Maclise, "Fitting out Moses for the Fair," "Nell Gwynne,"

after C. Landseer, and "The Christening," after Williams. Then followed the larger beautiful and well-known work, "Raffælle and the Farnarina," after Sir A. W. Callcott, a commission from the Art Union of London, and the "Glee Maiden," after R. Scott-Lander, for the Association for the Promotion of the Fine Arts in Scotland; for which society he subsequently engraved "The Ten Virgins," after J. E. Lander; "The Gentle Shepherd," after Wilkie; "Nannie," after T. Faed, R. A., and other works. In 1846 he commenced the engraving of the "Dame School," from Webster's well-known picture now in the Vernon Gallery, and, on its completion, "The Rubber" was undertaken, after the same painter. In 1853 he was elected an Associate Engraver of the Royal Academy, and in 1855 was made a member of the new class, thereby being eligible to the rank of Royal Academician. The engraving of "Bed

Time," after W. P. Frith, R. A., was produced in 1853, followed by "Many Happy Returns of the Day" (1859), and "Claude Duval," both from pictures by the same painter. For the "Queen's Gallery" series

ing of Wellington and Blucher," upon which Mr. Stocks has been engaged upward of five years, and which is now approaching completion. To the honor of the Art Union of London, let us add that this great work is a



he also engraved plates after Mulready, Leslie, Philip, Faed, and other artists.

Mr. Stocks is at present occupied on his most important work—that from the vast stereochrome painting by Maclise in the Royal Gallery of Westminster Palace, "The Meet-

commission awarded Mr. Stocks by that society. Two of the engraver's sons have adopted painting as a profession, and have already become exhibitors in the Royal Academy and elsewhere.

Artists—steel-engravers especially—will

thank us for introducing Mr. Stocks to them through our pages. He, probably, is the foremost among living line-engravers. He certainly has a very peculiar physiognomy, which, once seen, will never be forgotten. Observe how large are the perceptive faculties; how high the brow from Individuality to Human Nature and Benevolence! And how full the side head at Constructiveness!

That is a peculiar mouth—a long upper lip, indicating large Firmness and Self-Esteem; a full under lip, with a prominent chin, showing affection and vitality. The mouth inclines up at the outer corners, indicating amiability, and the whole contour expresses method, taste, skill, invention, originality, application, self-reliance, and perseverance. There is force and efficiency in that head and face.

CONSTRUCTIVENESS.

CIVILIZATION is advanced, and all the interests of the race promoted, through scientific mechanism. The invention of the steam engine, and its application to locomotion by rail and by water, brings people together; and the discovery of the magnet, and of electricity as a medium for mental communication, places civilized nations within speaking distance of each other. Each may, as it were, feel the other's heart throb, and come into *rapport* with all mankind in a twinkling. How almost miraculous! And it only remains for man to step yet a little higher to come into full fellowship with the Divine will, that all knowledge, all truth may be revealed to him. Man was created with spiritual eyes to see. Because so few are or have been "seers" is no argument against the theory that all men *may* become so developed, so spiritualized, that they may be more or less prophetic, according to the talents given and acquired. One has ten talents, another five, and another one. It is the right, the privilege, and the duty of each of us to make the *most* of all that we possess; then it shall be truly said of us, "Well done, thou good and faithful servant." But we are now considering the organ of Constructiveness, which has to do with mechanism in its various aspects. The artist uses it in painting, in modeling, and in drawing. The composer and the poet use it in constructing tunes and sentences. The writer uses it, and so does the preacher, physician—especially the surgeon—and the lawyer; and no one can make progress in life without it. This organ is usually active in children, and is used in constructing mud pies, kites, hoops, sleds, whistles, and in dressing doll babies, and in a hundred other ways. It should be encouraged by parents, and kept growing in their children. Give them tool-chests, a work-bench, or table, and assist them in their attempts in mechanism. Combine natural philosophy with it, and many of the most valuable

lessons will be learned, even without hard study and close confinement to books. We may have among us, in embryo, waiting for development, many a Newton, Fulton, Franklin, Whitney, Powers, Harvey, Galileo, and even Canovas and Angelos, whose latent powers may be quickened into action by suitable aid and encouragement. Our attention has just been called to this subject by the reception of a circular announcing the publication of a work to be entitled, "The Law, Practice, and Science of Invention, a Digest of Practical Knowledge for the Inventor, Patentee, and Projector.*"

"This work will embrace a full exposition of the leading features of the law of Patents in the United States and Foreign Countries, including those on Copyrights and Trade Marks.

"A comprehensive digest of the points in patent practice settled by decisions of the Courts in this country. For example, on the validity of patents; how a patent may become invalid; how infringed, how defended; difference between colorable alterations and *bona fide* changes in principle; what constitutes a double use of a device; how far new applications of old devices or methods may be patented; what forms the principle of an invention; what are the relative rights of joint inventors or joint owners of patents; relation of experiment to invention; secret inventions, how far at the mercy of subsequent inventors, etc.

"The introduction of inventions to public use; how the most successful inventions have been managed; agreements, licenses, and assignments; formation of joint stock companies for operating new inventions.

* By James A. Whitney, A. M., President of the New York Society of Practical Engineering, Professor of Agricultural Chemistry in the American Institute, Member of the American Society of Civil Engineers, late Editor of the *American Artisan*, etc.

"The development of inventions; essentials of a successful invention; perfecting details; working drawings; best methods of constructing models; designing apparatus; choice of materials, etc.

"The great mechanical problems of the age. This will comprise an elaborate statement of all the improvements which, like the steam-plow, the type-setting machine, the steam cotton-picker, and many others, are acknowledged to be worth millions if once invented and brought into use, but which thus far have baffled inventors. In considering each of these a careful review will be given of the most important means by which it has been attempted to produce the desired result. Many of the projects hitherto undertaken and given up contain the germs of future inventions of the greatest value, and are undoubtedly capable of suggesting new methods of construction and operation to the acute perceptions of inventors to whose notice they may be prominently brought.

"Other needed inventions in manufactures, arts, and industries. This will embrace many

scores of notices, from various sources, concerning improvements, some slight, some great, which are needed in different industrial arts, and, while capable of development at small cost, are believed to be worth from a few hundred to many thousand dollars each to the inventor who will practically overcome existing difficulties.

"A comprehensive review of the industrial condition of the different countries in which patent laws exist, and the classes of inventions best adapted to the requirements of each, and, consequently, most likely to be readily and profitably introduced.

"The work will be published by subscription, and will be sent to the press as soon as two thousand subscribers are obtained. It will contain five hundred pages, octavo, and be printed in the best manner. The price will be \$5."

We shall look forward with interest to the completion of this work, and notify our readers on its appearance. Meantime, let all our boys and girls have tool-chests, and learn to use tools, and also to invent.

INHERITANCE OF MORAL QUALITIES.

THE New York *Evangelist*, a religious newspaper, says: "A question has been raised by those close reasoners who are constantly interrogating nature respecting the moral responsibility of those who inherit qualities of mind as well as body:

"Do children really and truly receive their mental biases from their parents?

"Who shall decide that point? If they do, are they to be blamed for the manifestation of sentiments or propensities over which they could have no control?"

[We may answer the first question by asking another, Yankee fashion. If children do not "take after" their parents, whom do they take after? Do white parents beget black children? or do black parents beget white children?]

"Much of the character of an individual depends on the associations and circumstances of life. If always in the society of the virtuous and good, all motives for plunging into vice would seem to be removed. But when thus circumstanced, a pleasure in iniquitous courses, which involves them in unhappiness and misery, is then chargeable by some of the new school commentators to hereditary sources."

[A child *inherits* the natural disposition of one or both his parents the same as he inherits their physical peculiarities, such as complexion, light or dark, straight or curly hair; tall or short, thin or stout frames. If parents be musical, mechanical, artistic, or if they be violent, thievish, gluttonish, sensual, why should not the children inherit a *tendency* to these states or conditions? Is it not a law of nature that "like produces like?" Is not a tree known by its fruits?]

"If this should finally meet the approval of tribunals of justice, would it do to class evil-doers with lunatics, and send them all to asylums, instead of penitentiaries or the gallows? Who is qualified to answer the question?"

[The courts *do* discriminate, so far as they know how, in judging who is and who is not morally accountable, when they find lunatics, imbeciles, and idiots to deal with. Years ago, when W. H. Seward was Governor of New York, the case of a negro murderer—we forget his name—was brought to his notice, after trial, conviction, and sentence. Believing the convict to be of unsound mind, he declined to sign his death warrant, on the ground that he would not be responsible for hanging an imbecile or a fool. The negro died soon after in

the Auburn prison, and a dissection of his brain showed clearly that he was "unsound." Now we do not claim that this particular convict had *inherited* the diseased conditions which led to the crime and to premature death, but the probabilities point in that direction.

That the pre-natal condition of parents influences the disposition of children every mother knows. The laws of hereditary transmission are as clearly established in the human race, though with greater variations, as in that of animals. We phrenologists seek a reform in the criminal laws and in the modes of

punishment. We believe in reformatories and asylums, rather than in prisons with brutal treatment for the unfortunate; and in the name of Him whom you, Mr. Evangelist, profess to follow, we ask your kindly aid in bringing about such reforms in prison discipline as will secure the improvement of prisoners, so that, when released, they shall be self controlling and self-regulating fellow-citizens, better every way than when first put under restraint and judicious pupilage in the service of the State. It is clearly the interest of us all to do all in our power to make men better, rather than to *punish* and *degrade* them.

SOURCE OF THE SUN'S HEAT.—A NEW THEORY.

THE source of the sun's heat is a problem. This heat is so intense in degree and so great in quantity as to be astonishing. Secchi attributes to the sun a temperature of eighteen millions of degrees; Ericsson only four or five millions, while other philosophers put the temperature at a vastly lower figure, yet comparatively enormous. To illustrate the amazing heat of the solar orb, Herschel says that "if a solid cylinder of ice, forty-five miles in diameter and 200,000 miles long, were plunged, end first, into the sun, it would melt in a second of time." This degree of heat in the sun is argued from the heat of the sun at the distance of the earth from the sun. "No chemical combinations or combustions," says Prof. Young, "such as terrestrial chemistry, makes us familiar with, could account for it, so enormous is the amount."

Many theories have been put forth to account for the heat of the sun, but none of them is satisfactory. Mayer proposed that it derives its heat from the incessant fall of meteoric matter upon it; but this has been conclusively refuted. Williams suggested that the sun obtains its fuel from "a hypothetical universal atmosphere, through which the sun and his attendant planets move;" but this, also, is untenable. Another theory is, that the heat is derived from the condensation of the sun, which is said to be decreasing in size; but there is nothing to sustain this theory. There is no reason to believe that there is any less or any more heat derived from the sun now than at any former period. The earth at one time had certainly a much higher temperature than at present, but that was the result of internal and not of solar heat.

It is a peculiarity of the sun's heat that as we pass upward through the atmosphere toward the sun its rays become less and less powerful, so that at a comparatively slight elevation we reach a region of eternal frost and snow. There is no heat upon the moon, though its surface is exposed to the rays of the sun, as is evident from the fact that the shining of the moon imparts no heat to the earth; on the contrary, so high an authority as Prof. Tyndall considers the rays of the moon to be cold. At the same time we are to remember that the moon has no atmosphere.

Now, let us put several considerations together and see what we have. No source of heat is more certain and invariable than friction. We see the heat-producing results of friction every day, on every hand. Light flashes with a velocity of 183,000 miles in a second. What an inconceivable degree of rapidity! A flash of light would go quite around the earth seven times in a single second. A ray of light—a quiver, a vibration from the sun—dashes down through the vast fields of ether and enters our atmosphere. What is the result? Intense friction with the atoms of the atmosphere; and when the ray of light has reached the earth it has become heated. The sun is a *luminous* body; we have no reason to believe that it is an intensely *heated* one.

On this simple theory how easily these various phenomena can be understood. If the sun is a hot body, and if its rays are heated when they set out upon their journey to the earth, the temperature should not grow less as we ascend through the air toward the sun; it should remain the same, to say the least, at all accessible heights. But as we ascend through

the air the rays of light which we encounter have met with less resistance in their flight; especially, they have not been called into conflict with the denser stratum of air near the surface of the earth, and, consequently, they are less heated. The absence of an atmosphere upon the moon will account for the coldness of that satellite; for to say that a hot body will radiate cold rays is the height of absurdity.

Just here, however, the question may occur, why, if heat is derived from the friction of the sun's rays with the atmosphere, does not the friction of the moon's rays with the same atmosphere produce heat? That question is easily answered: the sun is a self-luminous body, the moon is not. There must be, as there unquestionably is, a very wide constitutional difference between the character of the rays proceeding from the sun and those proceeding from the moon—a difference established by Him who, "in the beginning," made the sun, a self-luminous body, "to rule the day," and the moon, a merely reflective body, "to rule the night."

But it may be questioned that the friction of the sun's rays with the atmosphere can be sufficient to produce the degree of heat that we find in a sunbeam; and, especially, that its flight through a few thousand additional feet of air can cause the difference in its temperature on the top of a mountain and at the level of the sea. We know that the effects of friction are wonderful. We draw a match a few inches across a hard surface, and friction ignites it. A man allows a rope to slip rapidly through his hands, and friction burns the flesh from them. A railroad car runs a few miles without having its wheels properly lubricated, and so much heat is evolved as to set the car on fire. A meteor in flying through space at a comparatively slow rate of speed, is drawn into our atmosphere, and friction causes it to take fire and burn. "If very small it is consumed in the upper regions, and leaves only the luminous trail of a shooting star. If of very large size it may sweep along at a high elevation, or plunge directly toward the ground. Becoming highly heated in its course, it sheds a vivid light, while, unequally expanding, it explodes, throwing off large fragments which fall to the earth as aerolites, or continue their separate course as meteors." When causes so comparatively trifling are followed by effects so striking, what may not be the result of a ray of light flashing down through the atmosphere at the rate of 183,000 miles in a second!

In the discoveries of the spectroscope, how-

ever, there may seem to exist an objection to our theory of the source of the sun's heat. The spectroscope is a modern invention. Without going into any description of this instrument or discussion of spectrum analysis, suffice it to say that by means of this ingenious apparatus the existence of iron, magnesium, sodium, hydrogen, and several other elements, in a state of combustion in the sun, have been discovered. But it does not follow that there is necessarily that degree of heat in the sun that philosophers have attributed to it. The luminosity of the sun must depend upon something; why not upon the combustion of hydrogen, iron, etc.? It is almost certain, from the facts already discussed, that the warmth of the sun's rays does not depend upon the heat of the sun, but upon their friction with the atoms of the atmosphere. Much of the solar light which illuminates the earth does not come directly from the sun, but is the result of the dispersion and diffusion of the sun's rays by the reflection of the atmosphere; in like manner the genial heat which we derive from the sun's rays may be attributed indirectly to the vitalizing envelope that surrounds the rolling sphere.

T. J. CHAPMAN.

IS IT TRUE?

IN a recent novel the writer thus defines his position: "Stories! stories! stories! stories everywhere! stories in every paper, in every crevice, crack, and corner of the house. We see that this thing is to go on. Soon it will be necessary that every leading clergyman should embody in his theology a social story to be delivered from the pulpit, Sunday after Sunday. . . . Finally, all science and all art will be explained, conducted, and directed by serial stories, till the present life and the life to come shall form only one grand romance."

This is what we are coming to, is it? This is the way we are to grow "weaker and wiser." We are to become so weak that we can not appreciate any kind of literature, unless it is told to us in the form of a story. Teachers are to teach stories, and preachers are to preach stories. Mathematical questions are to be solved by weaving them in with a story. The hero will probably give a clear demonstration of various kinds of propositions during the quiet winter evenings. Some other hero will teach his lady-love the languages, and in that story we shall be taken through all the different declensions without once stopping to won-

der why "Latin nouns have so many cases." Another Adolphus and his fair one will talk of historical events. And as we read that story, those long, hard names, which have always been a dread to the scholar, will become "perfectly charming," and dates will be readily committed to memory. Of course all of these things will be talked about during courtship and the honeymoon; for whoever, in a story or elsewhere, heard of a husband and wife having a good social visit after that time?

But, seriously, are we going to allow stories to take the place of other literature? Shall we sit and see our friends reading trashy novels without warning them of their ruinous effects? We already have too much day-dreaming and too little real life. Sometimes it seems as though we had forgotten that life was real, but regard it only as a dream, and stories rapidly increase dream-life.

In speaking of novel-reading, a writer says, "It is a culpable habit; it consumes much valuable time; it is also a waste of money. The inveterate novel-reader, like the drunkard, lays out his money for that which is neither food, clothing, nor shelter."

The novel-reader's course is very similar to that of the drunkard. They commence by an "occasional" story, which they read to rest them from business, or to pass away the time while traveling. At first they read nothing but stories which are written for the purpose of exposing national or individual follies. Next they read to learn human nature; then, as their appetite increases, they read without any excuse, only to satisfy their longing desire for romance. Finally, business, friends, and many opportunities of doing good are neglected for the sake of a story. The realities of life are irksome to them. They complain about labor, and are constantly wishing Adam had never sinned and compelled man to "earn his bread by the sweat of his brow." They wish they had been born rich, or that "their ship would come in;" in fact, they are desirous of anything that will release them from toil and give them leisure.

Now, have we not right here a work to do? Is it not our duty to help clear the land of this curse? Let us awake and be as ready to defend the right as others are the wrong. Let us not sit watching the tide of events, vainly regretting that wrong is on the increase, but stand ready to protect the right. "Let us not be weary in well-doing, but faithful unto the end."

KATE RENEL

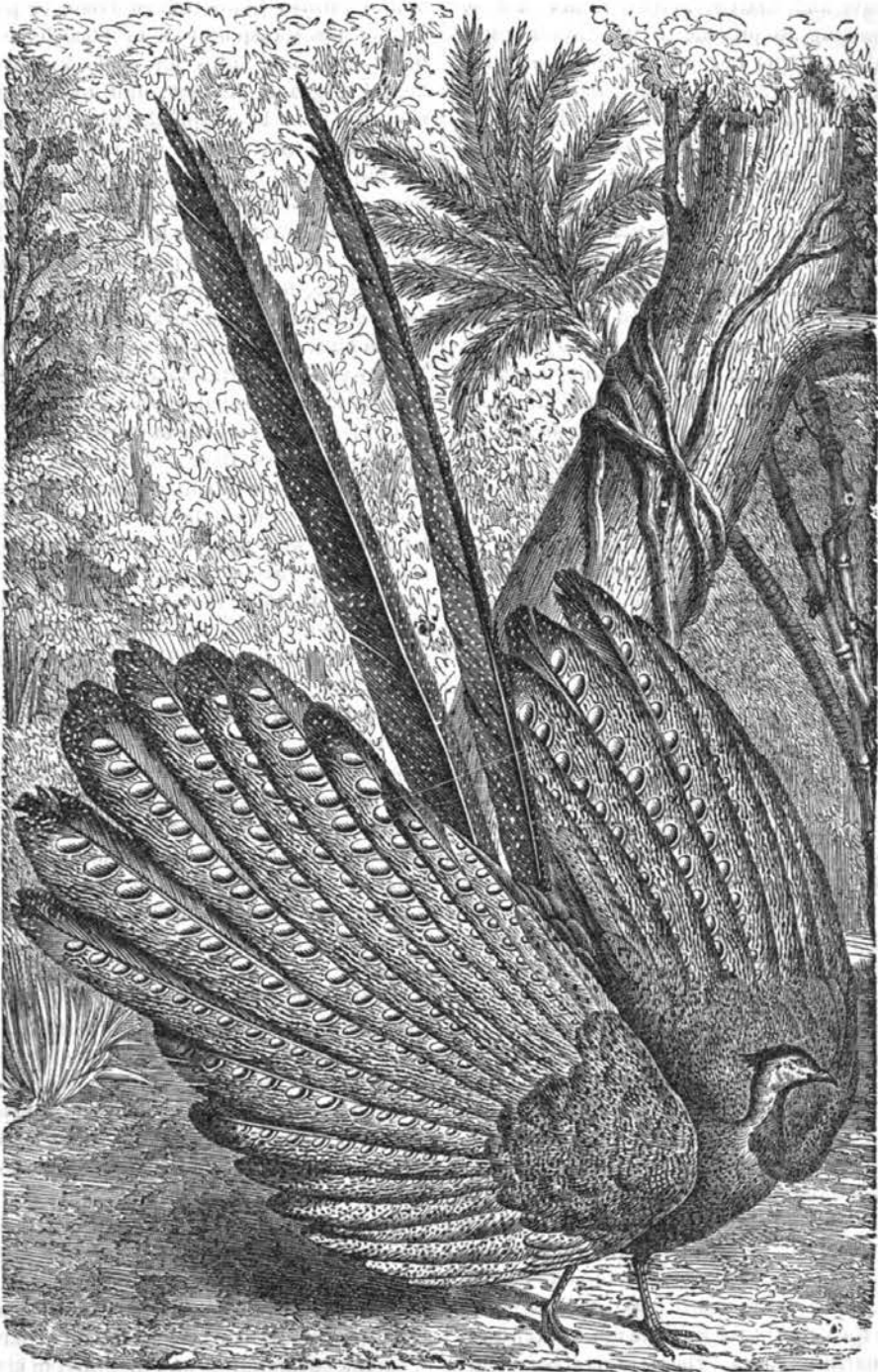
A REMARKABLE INVENTION.—The New Haven *Palladium* says: "Mr. Henry Bushnell, of this city, has invented a machine which, it is said, Mr. Thurston, the celebrated patent lawyer of Providence, calls the most remarkable he ever has seen. It is the result of years of thought, is made to utilize the power which there is in the ebb and flow of the tide. It is so made that whether the tide is rushing in or out a wheel will turn the invention, consisting in preserving a constant motion of the wheel. This power will be used to pump air into a large cistern, from which pipes will extend over a city, the compressed air being used as a motive power. Mr. Bushnell intends to set up the first tide wheel in the Quinnipiac River, where, he says, the tide rushes in and out with a force equal to about seven thousand horse power."

THE ARGUS-PHEASANT.

THIS most beautiful bird is rarely seen in America. In fact, we can not remember a single instance when one has been exhibited here. The argus genus belongs to the family of gallinaceous birds, and is a native of Asia. It may be that the common pheasant, well known in Europe, is a member of the genus, although very different in the character of its plumage, being not above the average of fowls in beauty in that respect. The argus is found now only in the thick forests of Sumatra, Malacca, Siam, and of the East India Islands; and there, on account of its retired habits, it is rarely seen and very difficult to catch. When caught, it does not, like the peacock, endure a long sea-voyage and thrive, but pines for its native haunts, and dies. Our engraving is a fair representation of this magnificent bird. Its size, on account of the wealth of its plumage, appears to be nearly that of a turkey, but when divested of its feathers, it is not much larger than a barn-yard fowl. There is a short, hair-like crest on the top of its head. It is the male bird which has become distinguished for beauty. The tail consists of twelve feathers, of which the two middle ones are very long, sometimes exceeding four feet. Their color is a bright brown, dotted with fleckings of white. The secondary feathers of the wings are much longer than the primary. Each of these is ornamented with a row of brilliant spots under the web on the outer side, the remainder of that side being filled in with spots of deep brown on a yellowish gray ground. It is to

these eye-like markings that it owes the name argus. The inner web is white at its edge, and has the remainder filled up with round and

hues of black, brown, yellow, orange, and white are mingled and mottled, shaded and blended in a wonderful manner. The male



oval spots. The principal quills are of a fine, yellowish gray with oval, dusky spots. The wing feathers are very richly variegated. The

has power to spread its feathers into a broad, sweeping, fan-like plume, which presents a spectacle of great attraction.

ENRICO DANDOLO.

AT a time when every one is ransacking his shelves for accounts of sieges and conquests and martial heroes, it may not be uninteresting to present to the reader, especially the younger one, an abstract from Venetian history. Among many names round which the glory won by heroic deeds still plays, brightly glows that of Enrico Dandolo, elected Doge of Venice in 1192. This splendid old man, who took upon himself, first, the cares of a great government, then the direction of an armament, when almost blind, and at an age when the haldest man finds home, quiet amusement, regular habits, and light employment not only pleasant, but necessary for the enjoyment of life, achieved a fame that will never be forgotten while a Venetian heart throbs. That he fought in many an action and was ambassador to the Greek court is nearly all that is known of his long life previous to 1192. There is some doubt as to the means by which he lost his sight, whether in fighting or by the hands of Manuel Comnenus, Emperor of the East. Certainly, the last supposition will not strike the reader of the history of those times as at all improbable. Dandolo displayed his vigor at the very beginning of his reign by avenging the seizure of Pola by the Pisans, attacking and discomfiting their fleet, and he was only prevented from taking further retribution by the announcement of the fourth Crusade. Fresh from one of the greatest struggles on record, I think we Americans can far better understand the historian's description of the Conquest of Constantinople by the Venetians than we could have done eight years ago. The great barons of France, so eager for the Crusade, were what we should call "filibusters;" but to free the Holy Sepulchre and extend the temporal and spiritual power of the Church were, if mistaken, noble ideas; and in a horde of soldiers the love of glory, of money, of wild pleasure must have most influence over the greater number. The journey of the previous crusading army had been made by long and circuitous marches; the barons resolved to send six envoys with instructions and powers plenary to ask Venice for the means of transport, she being then, as became the Bride of the Sea, the most important of the maritime states. Dandolo received them with honor, and demanded eight days for the Republic to decide on its answer to the request for means and transportation. At the end of this period the Doge announced his condi-

tions. If he obtained the consent of the Great Council and the Commons of the city, he would furnish flat-bottomed boats, or palanders, for the transportation of 4,000 horses and 9,000 esquires; ships for 4,500 knights and 20,000 sergeants on foot; nine months' provisions were to be supplied, twice the sum at which the men's portion was rated to be given for the horses. The engagement was to last one year from the day of departure. The sum demanded in return for this aid was £170,000 sterling. Dandolo also promised to equip, free of expense, for the love of God, fifty galleys. But Venice was a mercantile power, so all conquests by sea or land were to be divided equally between the contracting parties. The conditions were accepted, 2,000 marks were paid to the Doge with which to start.

Dandolo more than fulfilled his promises, but owing to the death of Count Thibaut, of Champagne, one of the great barons, the exhaustion of many purses, the unwillingness of some of the barons to give any more than the sum first specified, the willingness of many to break their vows, the Crusaders were not willing or not ready to fulfill their part of the conditions. The spirit of many leaders, however, was that of Dandolo's own, self-sacrificing and energetic; so they strained every nerve to pay the debt to Venice. Still, 3,400 marks (£68,000) were wanting. Dandolo was ready with a plan totally opposed to the wishes of the Pope and to the vow of the Crusaders to attempt no enterprise aside from this direct purpose: Zara, once theirs, now under the protection of Hungary, lay on the road to the Adriatic.

"Turn our arms there first," said Dandolo, "it is dangerous left unsubjugated behind; our communication between Palestine and Europe would be ever in danger. When this is done, and then only, will the Republic allow the Venetian armament to sail." This was the substance of what Dandolo said, and the new arrangement was ratified.

There was mass held in St. Mark's the Sunday following. Barons and meaner pilgrims gathered in prayer—an imposing scene. How the upturned faces must have glowed as an old man, tall, ruddy with the health of age or excitement, commanding and dignified in appearance, ascended the tribune, and, turning the blue, undimmed-looking eyes, that nearly all present knew to be almost sightless, on the vast assembly, spoke like a hero and a sover-

sign: "Signiors, you are associated with the bravest people on earth, for the highest enterprise mortal man can undertake. I am a very old man, feeble in health, and have more need of repose than glory; yet, knowing none more capable of guiding and commanding you than myself, who am your lord, if it be your pleasure that I should take the sign of the cross, to watch over and direct you, and leave my son in my place to protect our country, I will cheerfully go and live and die with you and with the pilgrims."

With a great shout the vast audience ratified the compact.

On the 9th October, 1202, the fleet sailed from the port of Venice; but Boniface Montferat, the leader of the land forces, was not at his post, perhaps detained by personal affairs, perhaps afraid of the censure of the Pontiff, Innocent III. Zara lay before them after a month's weary voyage, and that city's strength astonished the pilgrims. The inhabitants were equally astonished, and much more intimidated at the sight of the foe, and immediately sent to the Doge, offering surrender on the single condition of personal security. Dandolo laid the offer before the allies; but while in council, the disaffected, incited by some of the chief citizens of Zara, told the deputies that if Zara could hold out against Venice, there was nothing to fear from the allies.

The deputies returned to the city, and Dandolo, on re-entering his tent, heard with anger and contempt the cause from the Abbot De Vaux, who at the same time interdicted the Crusaders from attacking the Christian city of Zara.

When Dandolo stated the case to the barons, they were as decided as he in reprobating this piece of treachery, and in vowing the destruction of the city. Five days they battered the walls, on the sixth the Saraites again offered the surrender. Then, as now, surrender did not always preserve from plunder, and the spoil was equally divided between the French and Venetians. The troops went into winter quarters there, and Dandolo with his fellow chiefs had need of all their skill as rulers and commanders to keep the peace in the host. Montferat arrived with a numerous reinforcement, and the Crusaders would probably have moved eastward in the spring but for the appeal of Alexius, son of Isaac Angelus, Emperor of the East, to the barons for aid in overthrowing his uncle, the usurper Alexius Angelus, who, though he is extolled by a native historian for being uncommonly humane, took

from his brother both crown and sight. The young Alexius was now at the court of his brother-in-law, the King of Germany, and sent by envoys the fullest of promises. The Pope's party, represented by De Vaux, refused. The barons, generally, heartily espoused the cause of Alexius. Dandolo saw that Asia Minor, or Egypt, must be secured to gain Palestine. Many, too, preferred fighting nearer home than in the Holy Land; and Turkish gold is said to have worked not vainly among the champions of the Cross. So a treaty was signed in despite of Innocent III. and his party; and to calm some fears of their followers, perhaps some of their own, the barons begged forgiveness of the Pontiff before he could hear of this fresh disobedience. He forgave, telling them for the future to devote their energies to the deliverance of Palestine. If the Venetians were penitent, they might be forgiven also; if they were not, the barons might still use the ships of the excommunicated State, but must separate themselves as far as possible from such a God-forsaken people. The Venetians made no show of submission, but eagerly continued their labors of preparation.

The Pope, discovering the second intended transgression, sent a severe reprimand, to which no attention was paid. The fleet again set sail. The array was so splendid that some of the recreants who had left the army, or failed at the rendezvous, returned with a couple of ships to join their old comrades. On went the fleet, past the lovely isles of the Archipelago, through the narrow Dardanelles, till every sail was spread and every banner flying on the Marmora. Then appeared the great city, that wonderful city, "The Queen of the Earth," Constantinople. The Franks landed on the Asiatic side, and the next day a message came from the Emperor, which was returned by one of defiance from the Doge and barons. From the heights around Santari there was a good view of the city and its environs, of which the allies soon availed themselves. With great shouts the Venetian galleys approached the city, and ladders were swung from the yard-arms, which, from their great height, overtopped the walls. The astonished citizens believed they saw men descending from the air into their midst, and a fight ensued with sword and lance between the earth and sky. The old Doge stood on the prow of his galley, and urged his people to land. With desperate efforts they ran the boat on shore, and all leaping out, the banner of St. Mark was borne before the fiery old hero. A scene of wild em-

ulation followed, and one brave fellow, killed probably while performing the act, and whose name no one knew, planted the standard on one of the Seven Towers. The besieged fled, the invaders rushed in and seized twenty-five towers. The Doge then garrisoned them, and sent to let the barons know of his success, and proceeded to send booty and horses to the boats. A fresh body of Greeks returned to the charge, and the Venetians set fire to the houses between themselves and the foe. A terrible expedient; but one can not but admire the order, prudence, and vigilance of Dandolo in the whole attack. The Greeks turned on the barons, already repulsed in another attack. The Emperor Alexius, though unwarlike in disposition, directed a sally from three gates on the camp. The French drew up before the palisades which protected their rear and awaited their fate, the enemy numbering more than sixty to one! Tidings of their peril reached Dandolo while rejoicing in his hardly-won towers. Leading the way, he rushed to rescue or death with every man that could be spared from the fleet.

The force of Alexius was overwhelming; but desperate men sell their lives dearly, and there was every prospect of a fight such as might have equalled Chevy Chase; but the previous success of the Venetians must have strangely daunted the Greeks. The enemies regarded each other for a long time without a movement. At length the Emperor signed to retreat. Joyful interval! The danger was to be met the next morning, perhaps with no better result, but the imminent peril was past, and the exhausted soldiers could take off their armor. During the night strange rumors reached them, to be confirmed in the morning. The usurper—miserable coward!—had fled to an obscure village in Bulgaria. The chief eunuch of the palace took temporary command. Old Isaac Angelus was roused from his dungeon and led to the palace to receive afresh the acclamations of his people. When all doubt of these wonderful facts was removed, the allies gave way to their joy.

Isaac and his son were jointly emperors; but they quarreled, and were certainly not at all grateful to their deliverers. The allies were indignant, and finally bearded the lion in his den; that is, Conon de Bethune, Geoffrey de Villehardouin, and Miles de Brabant, with the Venetian counsellors, rode to the palace, alighted, and found themselves in the presence of the Emperors' full court. They warned the sovereigns that if their promises were not kept,

they (the Crusaders) should renounce the Emperors as lords and friends, and pursue them to the utmost extremity; then, without stopping to hear the tumult of anger and surprise that ensued, they left the palace, mounted their horses and escaped uninjured.

A war of skirmishes followed. The Venetians, by their courage and skill, once saved the fleet from destruction by fire. After Alexius was murdered by the agency of Mourtzonphlons, and his father died of terror, the allies, ignorant of what had occurred, were invited to the city, in the name of Alexius, to settle their claims and rewards; but Dandolo's sagacity saved them from being murdered. Innocent III. had pardoned the Venetians because he was obliged "to look after the lame and halt members of the Church as well as the perfect ones;" and when he heard of the murder of Alexius, he declared that war against the usurper and his abettors was just and lawful. He granted full dispensation to those who should die in the cause; so preparations were made for another attack on Constantinople. Mourtzonphlons had energy and courage, and while vigorously preparing for war, held himself ready for pacific arrangements.

The barons demanded two millions (sterling), and the Doge was appointed to conclude the treaty. The attempt proved useless, and hostilities recommenced. In one of his sallies the Emperor barely escaped with his life. The sacred ensign, to which the Greeks attached a superstitious value, was taken by Dandolo. It was decided in council that a great naval attack should be made by the joint forces of the Doge and his allies. Before this the disposition of the spoil to be gained was decided as calmly as though Dandolo, from whom the proposition came, had prescient power. Two attacks, the second being successful, were made upon the city, and then followed the two common horrors of war—spoliation and destruction. Scarcely a monument of taste and skill was preserved to adorn the churches or capital cities. Dandolo placed the four horses of gilt bronze on the western portal of the Basilica of St. Marks, where they remain to this day, with the exception of a short journey to and from France. Baldwin, of Flanders, was elected Emperor. The division of spoil was made in accordance with the previous agreement. Venice acquired Aegospotamos, Nicomedia, Adrianople, many islands in the Adriatic and Archipelago, with a long list of ports. Dandolo was allowed to tinge his buskins with purple, the imperial hue, to

claim an exemption from feudal duty, and to style himself Despot of Roumania and Lord of One-Fourth and One-Eighth of the Roman Empire. His services, wisdom, and age exalted him in the eyes of all, and that reverence often prevented the swords of the warriors who had fought so bravely side by side from being drawn upon each other.

With success came quarrels and separations, over which Dandolo could have no control. Great reverses followed. Baldwin was taken by the Bulgarians, against whom the allied powers were now fighting. Dandolo, aided by the intrepid and prudent De Villehardouin, conducted the remnant of their forces back to Constantinople, almost the only possession left

to the Latins, of whom, happily, there were enough to hold it; and before that went, too, as it subsequently did, Dandolo, worn out, at length, laid by sword and casque and lance, his honors and his cares, folded his hands on the cross for the last time, and slept. Under the vestibule of Santa Sophia were laid the remains of an able ruler, a brave warrior, a real friend, and, we trust, allowing as well as mortal judgment can for the difference between those times and these, a *Christian knight*.

He had the rare privilege of carrying even to the grave almost unimpaired the personal and mental gifts with which God had endowed him, leaving behind him sons who did not lower the dignity of his name. EMBERS.

THE ENGLISH LANGUAGE:

ITS COMPLEX NATURE—DEFICIENCIES IN OUR MODES OF TEACHING.

BY LEWIS W. BURNET.

WHEN the Hon. Horace Mann was State Superintendent of the Public Schools of Massachusetts, he stated in his Second Annual Report that from all he could learn he was convinced that not more than one in twelve of the pupils in those schools understood the meaning of the words they read! "They do not master the sense," said he, "of their reading lessons; and the ideas and feelings intended by the author to be conveyed and excited in the reader's mind still rest in the author's intention, never having yet reached the place of their destination." He seemed to be quite at a loss for the *cause* of this condition, which, he says, "is widely prevalent, and threatens the most alarming consequences." He continues, "How the cause of this deficiency is to be apportioned among the legal supervisors of the schools, parents, teachers, and authors of text-books, it is impossible to say."

Every true and thoughtful teacher has observed and regretted the same defect in the daily exercise of his profession; but whether the principal *cause* of it has been discovered by any one heretofore I do not know, certainly no *publication* of the fact has been made.

An experience of over thirty years in teaching has enabled the writer to ascertain the *cause*, as he believes; and the importance of the subject impels him to make known his views and his reasons for them. That there is a great deficiency somewhere in our educational systems is proverbial. There is no fair proportion between the time and money ex-

pended and the useful results obtained. The chief cause of the deficiency is in the peculiar structure of the English language. A language complex and composite, made up by there being engrafted upon the plain and limited Anglo-Saxon stock a large supply of words taken from Latin and Greek and some other ancient languages, with a good sprinkling from the French and other modern ones. Perhaps one-third of the words of our *written* language—the language used in our spelling-books and in our easiest reading-books—are really to the learners a *foreign* tongue.

We have a *native* language and a *naturalized* one; and this distinction is as broad as it is among our citizens as natives and of foreign birth. It is, of course, the *naturalized* part of the English language which causes most of the difficulty to learners, and they encounter it at almost every step of their progress, from the first pages of the spelling-book until they "have finished their education."

In Webster's spelling-book the first lesson in two syllables has a large proportion of words derived from the Latin language, with scarcely any change in form or dress. Here we find the words "natal," "mural," "horal," "nasal," "trover," etc., given for a "task"—and rightly so-called—for children of six years of age! For all useful purposes they might as well be in the Chinese. And here, at the outset, we teach children to use words without attaching the least meaning to them. And this habit, the bane and preventive of all improvement,

follows them, with rare exceptions, through life, destroying nearly all the advantages of reading, and leading inevitably to a love for light reading, novels, and stories, because this kind of reading is understood generally by the reader, as it is composed mostly of simple Saxon.

Such being the facts of the case, and no one can successfully deny them, common-sense would dictate two things: first, that pure English words, native, not naturalized, should be used as far as possible in all primary studies and text-books; second, that inasmuch as most of the terms in science above the rudiments are necessarily derived from the learned languages, as the Latin, Greek, etc., the utmost care should be taken to give the learner all possible aid in acquiring a practical knowledge of the Latin and Greek part of the English tongue. This can only be done by the careful and persistent use of books on the "Etymology and Analysis of the English Language," which give the Latin, Greek, and other roots, and the prefixes and suffixes of what I have called the foreign part of the English language. By this means the learner is furnished with a key to the meaning of many words in our language which nothing else can so cheaply supply. The course indicated by these two propositions would go a great way in removing the difficulty now experienced in trying to become intelligent readers, especially in the natural sciences and in the English classics; and would furnish that which Hon. Horace Mann so anxiously desired.

But so far from adopting this obvious course, we find authors and teachers pursuing the very opposite. So far as authors are concerned, almost every text-book bears testimony to this charge. Any one by inspecting them will find that these books abound with words from the learned languages, brought into ours with little or no change, often when a pure English word was overlooked which would have conveyed the meaning and been well understood by the learner or reader. And, to make the matter worse, in our public schools dictionaries are rarely within reach of such scholars as may desire to consult them. Who has ever seen a catalogue of books for pupils in the public schools which contained *definers* and dictionaries for the use of each pupil?

Can there be any difficulty in perceiving the cause why there is so much "parrotting" in our schools? What else could there be under the circumstances? We put pupils to using a language a portion—and that not small—of

which is *foreign*; and, to cap the climax of absurdity, we deny them the use of the necessary books to learn the meaning of the words!

The prevailing use of so much Latinized-English is more a fashion than a necessity among authors; they often prefer the alien word to the native, when the latter would be the more expressive. This may be owing, in great part, to inadvertence on their part; being themselves familiar with these Latinized words, they very innocently suppose all others, even children, to be so! Or, perhaps, they wish to show their erudition, and thus give *clat* to their books. Or, again, they may imagine their readers are like the English farmer who complained to his parson because he "didn't give his hearers some *Latin* in his sermons." The parson replied he didn't know that any of his hearers wished it, or understood Latin. "That is neither here nor there," rejoined the farmer; "whether we understand it or not, we *pay* for the best and we ought to have the *best*." But as our written language, from whatever cause, is largely derived from foreign and classical languages, and as the terms of science are necessarily so derived, nothing is more obvious than that the utmost care should be taken to give the young and the mere English reader all possible aids in understanding this part of our language.

This matter has received neither the requisite attention of the public nor of educators, and has not been discussed at the educational conventions. We have seen no allusion to it in the press of this country or of England. One author remarks in passing that "teachers, not classical, would find benefit in studying the analysis and derivation of words." But how they were to use such knowledge he does not indicate. He does not seem to be in the least aware that the want of the knowledge that should be thus obtained, both in teacher and scholar, is the bane and deficiency in our schools; and from this cause chiefly arises that superficial education which is alleged to be a characteristic of our population.

"Words," we are told by high authority, "are the keys of knowledge;" and what will that knowledge be worth where words are imperfectly understood, or, which is often the case, not understood at all? A deep thinker has said, "Words may be compared to the pencil of the painter—they paint to the imagination of the hearer or reader." But we all know they must be *well understood* before they can do this. When not understood, the word-painting will be nearly the same to the reader

or student as the painting of the pencil is to the blind.

Reading the *words* and not the *meaning* is the rule among pupils, as Horace Mann found out to his great regret. And this kind of reading is worse than none; it leads to habits that prevent any self-improvement in after-life. And its natural effect is to leave the mind just in the condition to be amused and interested by the trashy tales and fictions so popular in our day; and whose influences are destructive to the thinking powers of the mind, to say nothing of morals. This deleterious literature is written, mostly, in plain Anglo-Saxon language, and is therefore understood by all, without the trouble of consulting a dictionary, and, of course, being well understood, the sentiments and language of the author find a response in the minds and imaginations of the readers. Hence its popularity.

On the contrary, all the useful and improving branches of literature, as history, biography, philosophy, the English classics, the *belles lettres*, etc., and the natural sciences, present difficulties, and often great ones, from the use of words derived from the learned and really foreign languages. Hence it is that books on these subjects are so little read by the masses. Here is the weak point in our educational systems, as has been said before. Our schools should qualify all pupils to understand and to read understandingly anything in the English language; whereas now the majority of them understand only the *Anglo-Saxon* part of it! Such is the fact, as we shall proceed to show from actual examples. These cases occurred a few years ago, and they are worth more than a volume of suppositions, or of scores of school "commencements," gotten up for the occasion. The following memoranda were taken from a lecture delivered not long since by the principal of the high-school of P—.

He said: "Out of a large number of applicants for teachers' situations in the public schools, only *one* knew the meaning of the word 'sumptuary,' and that, too, when the press of the city had often used the word in a late discussion of some municipal regulations. Again, no teacher could tell the meaning of 'hibernate.' But in the case of the word '*hibernal*,' one teacher wrote, with much self-complacency, 'Hibernal, relating to Ireland!'" This applicant, the lecturer informed his hearers, took the post of principal by election of the trustees. We can well imagine what his teaching would be, and how much his scholars would learn of the English language. But to

our notes. Another teacher under examination replied, "Alternate means not *ternate*." The word "tact" was given as the meaning of the word "odium," and it was thus incorporated in the sentence written on it: "He was an odium writer." This examinee was probably a graduate of the high-school, and the lecturer informed his audience, "This applicant took a situation as teacher by vote of the trustees." Another said "odium" meant smell; he wrote, "The odium of the new-mown hay." Question by the examiner: "What is the meaning of 'friable?'" The answer given by four pupils was, "something that can be fried." Of "vital?" Answer, "Relating to death." The word "develop" was given out. The answer was, "It means to swallow up." A sentence was written: "The whale developed Jonah." "Intrinsic?" The answer was, "Not trinsic." The word "utility" was given out. Answer, "Relating to the soil," confounded, doubtless, with "fertility." "Fluctuation?" To this was answered, "beating;" as "the boy got a fluctuation,"—flagellation was of course meant. It will be noticed that all the words above, whose definitions as given were so absurd or ludicrous, belong to what may be called the foreign portion of the English language, and it shows how little is really known or taught on this subject in what are called "grammar schools." And this is only a sample of what might be given if time and space permitted. But I will give a few more specimens, as it is seldom that the public get an inside view of the state of things in our institutions of learning. What the public does see is usually prepared for the occasion, and looks very well; but it is only a fancy picture.

To the question, "What does the word 'statue' mean?" the answer was, "a picture." This sentence was written: "I saw a stature of Washington." Question: "Atonement?" Answer: "A small insect." One pupil answered that "circumference is distance through the middle;" another wrote that it was "distance through the middle round the outside." "Gregarious" was defined to mean, "pertaining to idols."

These extracts are introduced mainly to show the difficulties of our language, not to foreigners, but to us natives. While we think we are only learning our mother tongue, we are really learning also parts of the Greek, Latin, German, and French languages, and that, too, with very little assistance. In public schools dictionaries can rarely be consulted, except by some few of the more advanced

scholars; and definers are seldom seen in these schools. Even the definitions attached to lessons in the reading-books are not required to be learned previous to reading the lesson. "I speak by the book,"—I have taught in those schools. The *reason* for this strange omission, as given by teachers and superintendents, is that the meaning of the words can be gathered by the pupil from the context. The foregoing sketch of examinations shows the weight of this reason, and Horace Mann's report of the condition of the Massachusetts schools furnishes the commentary.

The fact that the English is a peculiar language, and requires special treatment, has never been recognized in practice by authors or teachers to any useful extent. Nor has the great difference between the spoken language and the written been much attended to. The child soon becomes familiar with the meaning of the spoken words, as they are more nearly the real mother tongue, derived from Anglo-Saxon; but when a book is shown him he finds words to whose meaning he has no clue. For instance, what can such a child know of the word "mariner?" Nothing. He knows nothing of its root, *mare*, Latin for sea. With seaman and sailor the case is entirely different; their roots, sea and sail, are in his native tongue, he knows their meaning and is easily led to the meaning of their derivatives, seaman and sailor.

This is a fair specimen of the nature and difficulties of the English language; a language which, instead of growing in the greatest measure from its own roots like most others, has been made by engrafting from many languages upon the Anglo-Saxon stock. This process has made a very expressive and full language, but a very difficult one to master. So fond were the framers of our language of these foreign *grafts*, that even when they used Saxon for the most familiar names, they posted off to the Latin for adjectives to couple with them. Hence we have dog, Saxon, and canine, Latin, instead of doggish; so cat, Saxon, feline, Latin; fever, febrile; week, hebdomadal (quite a short name for weekly); day, adjective diurnal; year, annual, etc., etc., to the end, not of the chapter only, but to the end of the language!

And yet we are told that students, even the youngest, need no special instruction in getting the meaning of the words of such a language. In one of our fashionable private schools the teacher proclaimed that "spelling-books were of no use in his school;" but I had occasion

soon after to ask one of his Latin scholars to spell door-knocker; he spelled it thus: "door-nocer!"

The rudimental branches, on which all really sound learning depends, are much neglected, not only in our lower schools, but in our colleges. As one proof of this, we will cite a few specimens which we have lately seen of the scholarship of some of the graduates of one of our first-class colleges. Before they left the institution they wrote their names and some sentiment in each other's albums. Among these entries were found the following: "Time fly's," "I shall expect to hear you soon haranguing a public meeting," "I part with eatche one of you with regret." One had a sentence without a verb! etc. We will end these "awful disclosures" by an item that came under our own eye in a certain "*high-school*" composition—it was the verb keep spelled "ceap!"

In conclusion, we will say that if we have succeeded in showing that a great deficiency exists in our present modes of instruction, so far as our language is concerned, and if the cause and nature of that deficiency and evil has been truly indicated, we have accomplished a good work. It rests with others to apply the remedy—with parents and with such teachers as desire to see a reform in this matter.

HALLUCINATIONS OF GENIUS.

IT is curious to note the number of men eminent in literature or prominent in history who have been the subjects of temporary or persistent hallucinations, or of whom, at all events, such an allegation has been made. Hyacinthe Langlois, an intimate friend of Talma, relates that that celebrated actor informed him that when he came on the stage he was able by force of will to make his large and brilliant auditory disappear, and to substitute skeletons in their place. When his imagination had thus filled the theater with these singular spectators, their reactive power on himself was such as often to give his personations a most powerful effect. Sir Thomas Browne, Jerome Cardag, and Goethe also possessed, in various degrees, this remarkable faculty. In something of the same way the great mass of people interpret the accounts that Socrates had warnings from his demon; Brutus saw his evil genius before Philippi; Cromwell was visited by a woman of gigantic stature, who assured him he would yet be king. Napoleon believed in his star, at

which General Rapp found him on one occasion gazing in rapture; Joan of Arc heard voices and had revelations; Lord Castlereagh saw on one occasion a spectral child; Ben Jonson informed Drummond of Hawthornden that he had passed a night in looking at Tartars and Turks, Romans and Carthaginians, fighting round his great toe; Malebranche heard the voice of Deity; Lord Herbert, of Cherbury, heard an agreeable noise in the heavens, which he accepted as a favorable response to his prayer for direction in regard to the publication of a book; Pope and Byron saw each on one occasion a specter. The cases of Mohammed, Luther, Pascal, Ignatius Loyola, Colonel Gardiner, and a host of others, will occur to the reader as being probably examples of hallucination determined by that most prolific source of illusions, strong religious feeling. It is noteworthy, as bearing on the theory of hallucinations, that they are not always reproductions of past states of consciousness.—*Home Journal*.

[Disordered, or overloaded stomachs are the more frequent causes of hallucinations than any peculiarity in the form of the brain. Nor is this sort of hallucination confined to men and women of genius. Everybody who eats too much food, or that of an indigestible sort, will be afflicted with them; so also, will they who "give themselves up" to the emotions or the imagination. The intellect was given to guide us, and we should not lose ourselves in any wild wanderings. Perfect sleep is always dreamless. In perfect health there will be no morbid hallucinations. We repeat, those who eat too much pork or too much food of any kind, especially at night, may expect when trying to sleep to be chased by hags and specters.]

OBITUARY.—Mr. David Myers, a native of Germantown, Pa., born in 1792, and a descendant of the famous Swiss family of William Tell, died at his residence in Varna, Marshall Co., Ill., on the 14th July, 1872, in the 81st year of his age. He early found his way to the wild West, and as a pioneer showed his strength of character. He was not only a pioneer in the ordinary sense, but having become an orchardist and fruit raiser, he was a leader in stocking the county with valuable fruits. He believed in Phrenology, was endowed with a high, moral head, was a sound, clear thinker, very hopeful, persevering, and a useful citizen. He left ten children, who, with the grandchildren and great-grandchildren, number one hundred and twenty.

THE PHRENOLOGICAL JOURNAL for August comes to hand in good time, and well freighted. The number is more largely than usual made up of the class of subjects to which the work is specially devoted, which is not in its favor, except to the special devotees of that subject.—*Christian Advocate N. Y.*

[We are almost hopeless of ever bringing the editor of the good old *Advocate*—which we have read more than thirty years—to the acceptance of Phrenology. Why? The editor has not a bad head. He is well informed on many subjects, and yet he rejects Phrenology! We must call around at his house, examine his head, write out his character, and those of his wife, children, servants, etc., and convince him by the logic of stern facts. He *must* be converted to the *truth* as it is in science.]

WISDOM.

WE open the hearts of others when we open our own.

THE rose has its thorns, the diamond its specks, and the best man his failings.

As the flint and steel stricken together produce fire, so the conflict of men's minds elicits truth.

HALF the failures in life arise from the pulling in one's horse as he is leaping.—*Chapin*.

THE world estimates men by their success in life, and, by general consent, success is evidence of superiority.—*Everett*.

EVERY man's life lies with the present; for the past is spent and done with, and the future is uncertain.

A MAN who is not able to make a bow to his own conscience every morning, is hardly in a condition to respectably salute the world at any other time of the day.

So live, and when thy summons comes to join
The innumerable caravan, that moves
To the pale realms of shade, where each shall take
His chamber in the silent halls of death,
Thou go not like the quarry slave at night, [ed
Scourged to his dungeon; but sustained and sooth-
By an unfaltering trust, approach thy grave
Like one who wraps the drapery of his couch
About him, and lies down in pleasant dreams.—

Bryant.

LESSON TO RULERS.—The Chinese Emperor Tchon set out on a journey to visit the vast provinces of his empire, accompanied by his heir. One day he stopped among some fields where the people were hard at work. "I took you with me," he said to his son, "that you might be an eye-witness of the painful toils of the poor; and that the feeling their laborious lot among us should excite in your heart, may, in the future, prevent your consent to burdening them with taxes."

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

A PHILOSOPHIC Indian has truly observed, "Too much 'um jls' nuff."

COLERIDGE tells us of a man who had such an overwhelming self-esteem that he was never known to speak of himself without taking off his hat.

WHAT positive proof is there that King David and his son Solomon were tailors? "And Solomon mended the *breaches* which David his father had made."

"Six feet in his boots!" exclaimed Mrs. Beeswax; "what will the impudence of this world come to, I wonder! Why, they might as well tell me that the man had six heads in his hat."

"Is this seat unoccupied?" asked an exquisite of an old lady. "I don't know," said she, running her hands over the surface, "it feels mostly like plush, but you can't always tell."

"I WANT to know," said a creditor fiercely, "when you are going to pay me what you owe me?" "When I'm going to pay you? Why, you're a pretty fellow! Do you take me for a prophet?"

"SIR," said an irate little gentleman of about four feet eleven inches, to one six feet two, "I would have you know, sir, that I have been well brought up!" "Possibly," said the tall one looking down, "but you haven't been brought up far."

PHONOGRAPHY.—A phriend, phelling phunnily phigurative, phurnishes the phollowing: "4ty 4tunate 4esters 4tuitously 4tiflying 4lorn 4tresses 4cibly 4bade 4ty 4midable 4eigners 4ming 4aging 4ces."

JUDGE'S SENTENCE.—A pious but uneducated judge closed a sentence with the following touching reproach: "Prisoner at the bar, nature has endowed you with a good education and respectable family connections, instead of which you go prowling around the country stealing ducks."

Our Mentorial Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage. In all cases correspondents should give name and residence, as our time is too valuable to be spent on anonymous letters.

FISH AND PHRENOLOGY.—Please let the subscribers of the JOURNAL know what connection fish culture has with Phrenology.

Ans. We have three answers for this question. The first is, that every pursuit in life and every fact in every science has to do with the culture or gratification of the phrenological faculties; and second, as the title of our magazine is "PHRENOLOGICAL JOURNAL AND LIFE ILLUSTRATED," many things come appropriately under the head of "Life Illustrated," and fish culture is supposed to be one of those appropriate subjects. Third, as Phrenology relates to a sound mind in a sound body, everything which tends to give vigor to the brain has a legitimate connection with Phrenology; and fish, as an article of food, is most excellent for brain-workers on account of the large quantity of phosphorus which it contains. If any of our readers have such an excellent constitution

and such strength of brain that they can think continuously without becoming exhausted, they may not see the connection of fish culture with brain and brain work. We hope, however, that such persons will forbear complaint on account of those dull-brained people who are not so smart but what they need fish as a food for brain, and, therefore, will be interested to know how to cultivate that food which will tend to make them intellectual and wise. A little less "hog and hominy" and more salmon, shad, and blue-fish would promote health of body and clearness of mind.

STAMMERING AND STUTTERING. — I have been afflicted for some time with a painful hesitation in my speech. I am an officer in a society, and have much talking to do, but my delivery is spoiled and myself laughed at by this stut-ter. I find it impossible to pronounce H, S, R, and other letters, but those are the most difficult for me to pronounce. I do not think it is nervousness, as I feel calm when speaking; and certainly not from bashfulness, as I am intimate with those I am addressing. I feel that, while perfectly competent to fulfill my duty, this defect causes me to be only tolerated by the society. If you can suggest any remedy or recommend me to any book treating the subject that will assist me to overcome this impediment in my speech, I shall be very grateful.

Ans. We should consult a surgeon, and if there be any physical impediment, have it removed. In the "Combined Annals of Phrenology and Physlognomy" may be found a treatise on stammering and stuttering, with directions for overcoming the same.

SOUTH CAROLINA, 1872.

CHILD TO ADOPT.—**Mr. S. R. Wells.**—Dear Sir—Pardon this intrusion upon your valuable time and patience; but seeing, in a number of your highly appreciated JOURNAL, something about the destitute children of New York, prompts me to write a note of inquiry to see if it would be possible for me to have a little girl of about twelve years of age bound to me (I would prefer an entire orphan); if so, I could readily promise her a good home, substantial clothing, and a tolerably fair education—such as I can give her at home myself. If it is not asking too much, I would, indeed, be glad if you would give me a speedy answer, and very much oblige, *MRS. C.*

Ans. If you were in New York, with proper references to satisfy the officials who have charge of the children, you could doubtless find a girl to adopt that would suit you. The "Children's Aid Society," by their agents, take large parties of children West, and distribute them among the good people who want them, and who come to the points where it is known the children are to stop. When all that may be wanted there are selected and settled, the party moves on to another town, and so on till all are adopted. In this way of distribution the agents have an opportunity to learn the character and standing of the families who apply for children to adopt.

It would be difficult to make a selection for you and more difficult, perhaps, to gain the assent of the institution to send a child so far unattended by one of their accredited agents; and it might take more of our time to find the right one than you would be willing to compensate us for. Moreover, persons generally prefer to see the object of their care and affection before the matter is fixed, and it is a delicate responsibility to select for others. This would be lessened, however, if we had, as a field of selection, one of our public schools, or a good Sunday-school of five hundred pupils from substantial families.

Could you not find some orphan in Charleston or Savannah that needs your motherly guidance, and would repay you a hundred-fold for your care, culture, and wisdom? —

UNRULY BOY.—We have a son five years old in whom we have labored to implant principles of kindness, yet he is exceedingly self-willed—disposed to quarrel and fight. How should we train such a child to break him of his unhappy temper and implant a disposition of kindness and love?

Ans. It may be the child has inherited an "unhappy temper," which it would be impossible "to break." Patience, gentleness, and firmness, if inspired by wisdom and moral feeling, will generally guide and train such a disposition so as to make it tolerable. —

HEADACHE.—What is the cause of common headache?

Ans. Headache is caused by stimulants, by over-eating, by eating extra hearty food, or sometimes by abstinence from food for too long a time. A dull and disordered state of the liver is a cause of headache, and it sometimes is produced by too much excitement and exhaustion of the nervous system. Headache is a symptom, not a disease.

EGGS—HOW TO KEEP THEM.—Please tell me the best way to keep eggs.

Ans. There are several ways of keeping eggs. One is, to pack them, smaller end downward, in fine salt, so that no two eggs shall touch each other or the box or tub in which they are packed. Another way is to put them in a pickle of lime water; another is to varnish them, or cover their shells with melted beeswax, the object being to exclude the air from the contents of the shells, and to keep them cool. If one would pack eggs in salt, lime, or pulverized clay, and put them in an ice house, they might be kept any desirable length of time. At our house they get eaten—they do not keep, do what we will.

BILIOUSNESS.—I suffer from biliousness or torpidity of the liver. What mode of treatment will be useful in such a case?

Ans. Stop eating greasy food, sugar, and fine flour bread, and use more fruits and vegetables. Horses get bilious, constipated, and "hide bound" by eating too much corn meal and too little hay and green grass. In like manner human beings eat cake, pie, butter, sugar, spices, and fine flour bread, and drink strong coffee and tea, and wonder why they become dyspeptic and bilious. Drumming or spitting with the hands, gently at first, over the region of the liver, and the wearing at night a wet girdle, and washing off and a smart rubbing in the morning will be serviceable. Active habits in the sunshine and an abundance of sleep are good agents of health in these cases.

What They Say.

MIND AND IMMORTALITY.—"A Workman" writes his views of mind and immortality, and we give him a hearing merely for the sake of free discussion:

"I do not believe that we have an immortal entity within us that can think, speak, and do all that we can do separate from the body, but that we are organized beings capable of receiving impressions from without by means of the five senses, and that the brain has not of itself the power of thought, but when God infuses His spirit into us we become living. When this spirit, with the brain, and in connection with impressions from without are in action, thought is produced. This spirit fills all space, so that by it all things are before Him; so that He knows our thoughts afar off. Without it we could not raise the right hand or move the left foot; and when He withdraws His spirit we are resolved to our mother earth; and so the body goes to the ground, and the spirit returns to God, who gave it.

"This is like steam to the engine. You may fit up an engine, but it is useless until steam is let into the cylinder. Neither is the steam of any good without the engine, but both together pro-

duce motion, and the better and smother the machinery the more is accomplished. So it is with the brain; the more it is cultivated the more is comprehended. It is the same spirit that is in the ignorant and the intelligent, but the one is cultivated, while the other is not. Is not this true Phrenology? When you stop the steam from the engine, motion is ceased. When the spirit is taken away thoughts *subside*; or if the brain is very much impaired thought is confused. The result is *madness* and sometimes death. We can not lay claim to the spirit, for it is not ours; neither can we exist without it, as a certain poet has said:

"If Thou shouldst call me to resign
What most I prize, it never was mine;
I only yield thee what was thine.
Thy will be done."

"To show that thought ceases with this life I will refer to Psalm cxlvi. 4: His breath goeth forth; he returneth to his earth; in that very day his thoughts perish. Also, cxv. 17: The dead praise not the Lord, neither any that go down into silence. And Ecc. ix. 5, 6: For the living know that they shall die, but the dead know not anything, neither have they any more a reward, for the memory of them is forgotten; also their love, and their hatred, and their envy is now perished. Neither have they any more a portion forever in anything that is done under the sun.

"It is evident that immortality is not in us from Paul's statement, that *God only* hath immortality (1 Timothy vi. 16); and beside this there is not a single statement in the entire Book that affirms man's present immortality, but there is otherwise, such as Shall mortal man be more just than God? (Job iv. 17). Behold! now I have taken upon me to speak to the Lord, who am but dust and ashes (Gen. xviii. 27). Immortality is to be attained by a patient continuance in well-doing (Romans ii. 7)."

[Our friend quotes Scripture and interprets it literally, as in Ecc. ix. 5, 6, "Neither have they any more a portion forever in any thing under the sun." He seems to lose sight of the fact that the subject under treatment is the shortness of life and the complete mortality and termination of all earthly interests. At death our *earthly* work is done, and our portion in the matters of earth is forever closed. With our friend's literal construction of Scripture, how would he explain Jude i. 7, "Suffering the vengeance of *eternal* fire?" As the fire of Sodom was temporary, and destroyed the earthly life, may not the term "*eternal* fire" be employed to represent continuous or immortal punishment? If none have immortality except the regenerate, how can there be an "everlasting" suffering of penalty? See Mat. xxv. 46.]

SUCCESSIVE ALTERNATION.—Geology enables us to know that the earth was once blazing as the sun is at present; that it afterward was covered with water, and became habitable. This

is no mere matter of opinion, but a matter of positive knowledge; our habitable world was once a blazing sun, or part of one. Why, then, may not the sun also be subject to a similar change, and become in like manner a habitable world at some future time? There is no good reason whatever why this should not occur; but, on the contrary, it can be proved not only likely, but absolutely certain to undergo such a change. Who does not know that any given condition of any material substance is only temporary? that the sun being a material substance, its present condition must therefore be temporary? It is merely a question of time when it shall cease to blaze. It is but an enormous oxy-hydrogen light, sustained by vast quantities of aqueous rock. As soon as the aqueous rock about the surface of the sun is all consumed, the hydrogen gas all over its surface will instantly be converted into an ocean of water by uniting suddenly with the oxygen which at present sustains the combustion going on in the sun; and the explosion accompanying the conversion of such a tremendous amount of gas into water will exert a force upon all the revolving planets in our solar system sufficient to decompose all their oceans of water into their constituent gases (oxygen and hydrogen), so that they shall instantly begin to blaze as so many miniature suns, or enormous oxy-hydrogen lights; and shall continue blazing for thousands of years, until their numerous strata of aqueous rock shall at last be all converted into igneous rock, or else into a gaseous condition, when similar explosions will again occur on the surfaces of the revolving planets, and they will instantly be deluged with water, and so be prepared to become habitable worlds again. Thus do fire and water *alternately* cover the surfaces of the sun and the revolving planets, *ad infinitum*; and thus does the great universal law of successive alternation provide for light and heat continuously in a solar system, in spite of the very temporary nature of the substances which furnish them. But for the existence of this great law, light, heat, and animal life would cease forever in the solar system as soon as the sun is burned out; yet there is no evidence that any of the scientific men of this remarkably scientific age have ever even suspected the existence of this great law. MONK.

FROM A CLERGYMAN.—We copy the following extract from a private letter, received a few days ago. It was written by the Rev. Chas. Taylor, D.D. and M.D., formerly President of Millersburg College, Kentucky.

"I read your JOURNAL with much interest and prize it highly. I found, in looking over my old portfolio, the other day, a phrenological description of my character, given me in August, 1846, and was struck with the correctness of its delineation and the almost exact correspondence with the developments of my subsequent life, both in China and in this country."

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

VOL. LV.—No. 5.]

November, 1872.

[WHOLE No. 406.]



JESSE OLNEY, THE EMINENT GEOGRAPHER.

THIS was a man who would arrest attention and awaken inquiry in any company of men, large or small. He was tall and majestic. In his person and carriage

there was the ease of self-possessed dignity; in his manner and style he appeared massive, thoughtful, and powerful. There was, too, an air of gentleness and tenderness and of

attention to the words of others evinced in his bearing.

His head was large and high, indicating breadth of mind and character, and also steadfastness, elevation, and morality. If the reader will observe that prominent brow, and the fullness above it, he will see the foundation of Mr. Olney's scholastic ability manifested so conspicuously in his abilities as a teacher and as an author of school-books.

His eye was very prominent, giving him great talent for language and description. He had an excellent memory of facts, words, and places. Locality, situated on each side of the center of the forehead, was immensely developed; hence his fondness for the school of geography. The upper part of his forehead, especially where it widens out toward the upper part of the temple, indicates reasoning ability, inventiveness, and imagination.

His head towered up to a considerable height. He had very large Firmness, and persistency was one of the marked traits in his character. His Approbativeness rendered him sensitive to the good opinion of his friends, and to the censure of his enemies, if he had any. His Caution was well developed, yet his force of character, arising from a good degree of Combativeness and Destructiveness and large Firmness, was such as to give him courage and thoroughness. His large social development gave him cordial friendship—the spirit which won and retained hosts of friends.

The features, as seen in the engraving, indicate, as a summary, dignity, steadfastness, refinement, perseverance, earnestness, and strong affection.

If the mechanical inventor, who turns into new uses the materials of physical nature, thereby subserving the wants of man, is worthy of gratitude for his services to mankind, how much more is he deserving of per-

petual remembrance and of grateful praise who brings new and successful methods of instruction to bear on the human mind, thereby enlisting new forces into the culture and training of youth? The educator stands at the fountain of power, and in his sphere is a creator, who, in the eye of a true and enlarged philosophy of life, holds a place most prominent among human benefactors. He opens springs and fountains of energy, which the opportunities and various enterprises of the world subsequently invite into wider channels.

Jesse Olney, whose name for many years has been "as familiar as household words" to every school-boy in the Union, whose services in the cause of popular education, by authorship and by actual experience in the school-room, are of a marked and substantial kind, will long be remembered by the American people as holding an eminent position among the educators of the present century. He was born at Union, Tolland County, Conn., October 12th, 1798, and died at Stratford, in the same State, which had been his residence for many years, on the 31st of July of this year. He is widely known as the author of a geography and atlas for a long time very popular, some millions of which have been sold and used in the various schools of our country; also several works which have been received as valuable contributions to the school literature of America. Though Mr. Olney was honored with several offices of public trust, though he has served his native State at some nine or ten different periods as a member of its Legislature, and always performed the duties committed to his charge with ability and satisfaction, it is as an educator chiefly that the great mass of the American people are indebted to him. He was the first in our country who commenced the new method of geography, that of making the student *begin* with the description of the town he lived in, and enlarging therefrom into the wide world; while the plan previously adopted required him to commence in astronomy and to proceed from the sun to the earth. When his geography first appeared, in 1828, its concise and thorough merits at once rendered it a standard work throughout the country in that department, and many succeeding years only

caused new demands for its extended circulation.

The rare gift of teaching ably and well is the result of natural capacity, literary qualification, and the necessary amount of experience. The person who has never cultivated a farm may perhaps write theoretically well on agriculture, but his books will not prove efficient aids to the daily worker. He who would write well for schools should know by *experience* what schools are, a principle, this, which the sagacious world always recognizes in its estimate of the services men can render to each other. Mr. Olney was a natural teacher; and it was not until he had had more than twelve years of practice in the line of teaching that he undertook the important task of providing for the wants of schools by authorship. Twelve years of his life were passed in Hartford, Conn., where, by universal concession, his reputation as a teacher was of the highest order. We have often heard his labors spoken of in that city in terms of the most decided applause, and it is no detracton from others to say that as a working, practical teacher, he stood without a rival. Wherever he afterward resided, the schools around him felt the improving and reformatory influence of his counsels. In Southington, Conn., his residence for twenty years, we have often heard the remark that Mr. Olney had done more to advance their common schools to their present excellent standing than all other causes that might be named.

His first "Geography" was followed by a series of similar works, and of readers, of which the "National Preceptor" became particularly noted, an arithmetic, a "History of the United States," a valuable "Family Book of History," and other school manuals.

In early boyhood Olney was distinguished for the love of knowledge, for a strong retentive memory, which enabled him to recite whole chapters of Bible literature and consecutive pages of prose and poetry. Quite early he displayed a decided fondness for history and geography. At the age of nineteen he could recite a whole geography so perfectly that his teacher refused to instruct him in that branch; and so thorough was his matured acquaintance with the earth's

surface, that no river or other feature belonging to this science could be named with which he was not perfectly familiar and at home. He aimed to know the world by personal contact, by close observation of character, manners, and natural scenery. Twice he made the tour of Europe, once in 1835, again in 1838. In the New World he sought acquaintance with its various manners and scenery by tours through the Canadas and through twenty-two States of the Union.

Mr. Olney was one of those strong characters who make their mark, who can attempt important objects, and who never leave a work once begun unfinished. He was remarkable for two seemingly opposite traits: an accurate appreciation and mastery of facts, and the love of great universal principles. Authors like Spurzheim, Emerson, and Cuvier afforded him the greatest delight. His basis in all matters of opinion and belief was not authority or custom, but some great underlying principle of truth clearly perceived. He venerated a perfect freedom of thought, loved the wide range of natural science, and of great moral and philosophical ideas. In person he was noble and commanding; in intellect, bold and vigorous; in will, extraordinarily firm and persistent; in affection and friendship, strong and generous; in temperament and sympathy, highly social and cheerful; in method and system, exact; in manners, dignified, cordial, persuasive—always a friend to the poor and an opponent to the bigotted oppressor. No one could see and forget him. He was a practical man; and the school literature that bears his name had the merit of emanating from the united resources of much study and much experience in the wants of the department it was intended to supply, which is the secret of its extensive success.

In closing an obituary notice of Mr. Olney, a writer in the *New York World* says:

"A self-made man himself, he appreciated and sympathized with the struggles of his fellow-men toward education and an honorable career, and more young men than any one was allowed to know except himself have been aided by him, not only with wise counsels and influential exertions, but by generous assistance from his purse as well, to

tide them over the shoals which beset those who are not favored by fortune. His mind enriched by all mental gifts, his experiences widened by contact with the world and extensive travel, his heart sympathetic and fervent with fresh and glowing impulses which

endured to the end—his gracious life endeared him to all who knew him, while his blameless moral character ennobled all his associations.

"He was a man; take him for all in all,
We shall not look upon his like again."

INDEPENDENCE IN THINKING.

"**A** LONE in a great city!" Who has not felt this loneliness of special individualism, this yearning for a kindred mind to share our whole experience and in-experience—to be ignorant as are we, even unto a perfect sympathy—to be of us, like us, and still the something more which we would attain—to be able to tell us why we live, the purpose we are to fulfill, to show us the work that shall glorify us when we shall engage in it?

We are selfish of necessity, but extremely selfish through the perversion of our protective powers. The common herd of scientists is professionally urging us to keep upon the "rational" plane of materialism that will secure immediate convenience,—to be of the multitude, rather than above it, in spirituality, because we are obliged to mingle with it. To this end we are laying up our high protective walls of materialism, immuring ourselves in the narrow sphere of flesh and blood and animal instinct, and hoping to teach these immortal souls contentment with a little meager space of mortality, when they are already grown shortsighted by continually looking earthward. At once captor and captive, we mortify our higher faculties by chaining them down to inactivity among the low companions they have learned to despise, lest in absence from these we shall shrink from a degrading association with them, and thus become necessitated to rear a private domicile for our peculiar individualism. Humanity, with ready instinct, acknowledges itself entirely sympathetic in nature, and demands incessant intercourse. Attraction holds an irresistible charm for our thought, while in a corresponding degree we hate repulsion. The child calls our sympathy to its toys and pleasures as it continually exclaims, "See! see!" It desires to be fully recognized in

thought and action. Maturer years develop the method of communication without deduction from its adherent qualities. Intelligence is cognizant of some new wonder that lies contiguous to its gathered experience; and one of us, with an idea single from the universal thought, picking up some novelty that is attractive through that idea, holds his prize out for the others to see; listens to the ridicule or contempt of ignorance, "Ha! what can you do with *that*?" The character of the question condemns the treasure, and, unless more independent than the general mind, the cold water of contempt or discouragement diminishes the enthusiastic heat of his malleable thought, and it shrinks back to ordinary insignificance. With the multitude in error, rather than alone with God and the right, this is the prevailing sentiment of our common aim, the dangerous temptation of our ruling motive. We find nothing wrong or unnatural in the wish to be recognized as we are; but in this age of high-pressure principles, we soon overreach the honest boundaries of self-promotion, and demand the field of preferment and distinction. To be of the multitude is not enough; to be an acknowledged leader is the least promotion that will confer favor. Then, adverse to the dependent law of sympathy, and resultant of unexpected success, there is that opinionative egotism of pride which scorns to be educated or led by others; we choose to be self-protective and self-made, or nothing. We would help our immaculate self, and then save the erring multitude. We would be the teacher, and not the taught. With very little dignified appreciation of our worthy possessions, and a considerable effervescence of pride in our future possible success, we feverishly await the exit of present prejudicial circumstances and the ingathering of coming consistencies. Far beyond our practice is our

beautiful and practical thought; it beckons, calls, and entreats our companionship; is almost irresistible in its appeal; but what will our old friends say if we follow this mysterious stranger? They can not understand if we attempt an explanation, for that particular idea never enlisted their attention; it lies in our direct course, not in theirs; not one iota of it is in material contact with their consciousness—it is a myth, a nonentity to them. Shall we wait until the spiral of their experiences shall expand to touch the ether that encircles it, and probably lose sight of it itself? If we stand still, we become a stumbling-block and a point of mystifying centralization; a few grains of curiosity will draw a crowd to a spot, and every one of these persons will be wondering what is the cause of attraction. In pursuit of our own thought and business we are no false magnet, we stand in no man's pathway. If we have had a butterfly chase, we shall the sooner learn to distrust wings, and return contented with a slower locomotion; but it has been observed that the lightning never confines itself to the slow pace of a snail. With our thought our feet may traverse the mysterious realm of the unknown; behind our thought our snail pace will never overtake its lightning wings! Why was that distinct idea, that one peculiar theory, produced upon the camera of our individual brain, instead of being given to the multitude for general inspection? Because that was to be our own subject of experience, our central pivot of investigation; it lay within our exclusive, intuitive sphere, and we have no more right to feign ignorance of its kinship to our reason than we have to renounce the offspring of our flesh and blood. We are bound to nourish and protect it until it has an individual independence, until it is a thing of itself—objective, as well as subjective.

It is not when the brain or the muscle is in positive action that we feel alone, but when the questionable condition between action and inertia, between the positive and negative forces, overtakes us, each striving to obtain the ascendancy of power, and thus keeping up an equilibrium; this is the time when we turn inward to ourself and discover the singleness of our being; this is the form of that living death which hath a sting; this

is the loneliness of despair. The blessed intelligence that streams in, like the glory of a rarely beautiful fine morning, through the crystal windows of our intermittent souls, is only some thousands of years beyond our cloudy interpretation, because we have not possessed the moral courage to praise God in the midst of an irreverent people; and we could not conscientiously creep out stealthily under the covert of the shades of night and with the grand solemnity of a full heart echo the psalm of David: "When I consider the heavens, the work of thy fingers, the moon and the stars, which thou hast ordained; what is man, that thou art mindful of him? and the son of man, that thou visitest him? For thou hast made him a little lower than the angels, and hast crowned him with glory and honor. Thou madest him to have dominion over the works of thy hands; *thou hast put all things under his feet.*" Alas! for the degeneracy that feels contempt for the weak, wavering will, scarcely able to resolve our thought into any line of action, and allowing us to stand, pitiable objects, to be jostled and trampled upon, when we might be moving forces in the great and good cause of Christianity.

Tired of self-reproach, everybody complains of everybody else, and ignores self-power and self-consecration. There is so much to be lifted up, so much to be learned of the manner and means of soul-raising, and such a ghostly fear that a little mistake here or there will incur ridicule or pity, that we live from day to day mechanically caring for the body as if it were an ephemeral thing, as if it were possible that we are to quit claim upon all these earthly intelligences when we have just begun this peculiar life. Who has stood, at the sunset hour, when the broad expanse of heaven was robed in a sea of gorgeous colors, blending and contrasting with their innumerable shades and transparencies, linked to the purple hills, to the dark tapering spire, to the beautiful foliaged imagery of the towering tree, to the sable roof of church and tower, and dome of costly edifice, to the "lowly thatched cottage," and not felt that this life and heaven—like earth and sky—are irrevocably wedded; that he who is witness unto all this grandeur shall return, like the setting sun, an eternal heir to the

joint kingdom of earth and heaven? In the beauty of nature and in the magnificent glory of our thought is all our hope, our sympathy, our consciousness, our happiness—our God. We can not separate the two; imagination in its loftiest flights has but touched an earthly paradise. Education may allure us to the skies to find our future, but it is only an earth with a purer, happier people that our spiritual artist can limn. His ideal is but the incipient imagination of untold beauties all around him; he can not attest to the millionth part of a grain of knowledge pertaining to this sphere. With wistful eyes and yearning hope he looks out to the illimitable sea of the future. "Oh, could I behold the life that awaits me!" But how can he expect to enjoy the fruition of a *hope that he has not analysed—of a belief that is undefined?* When he takes so little cognizance of the life that now is, when he is so blind to the flesh and the spirit of which he himself is, shall he pass away before he has awakened to this birth of consciousness? When sound has just conceived the possibility of unlimited modulation and use, when form discovers there is no end to transfiguration or space, when color can produce and reproduce with never-ending change, when love has just breathed its true feeling of immortality, when all the objects of his senses are as yet but baubles for his childish thought and intelligence—and still his God and heaven exist in these, and only in these—is it possible that he is to take a hasty glance over their mighty magnitude, and, with the spirit of joy, to be able to exclaim, "Now I am?" Painfully inferior to this, shall he there be equal in happiness and love to the towering Godhead?

We know that extreme changes are produced by sudden revolutions; that earthquakes, tornadoes, wars, and pestilences are effective of the new conditions which we learn in time to regard as superior to the former things that have passed away; and we know that stagnation, or force long pent, is signal of revolution; but as the progress of civilization and general development goes on, the primitive creative forces, radiating from a common center, and the secondary and subsequent forces that are introducing themselves among these, through complex-

ity, render it impossible to produce such general, immediate results; in short, it is evident that in every division of the forces the laws of change recede from quick, revolutionary motion to slow, peaceful, and harmonious action; and the result is just as great, but in the new order of things more diversified and less conspicuous, in its intermediate grades. Here is the reason we should not cling to the primitive life with its broken threads of thought. We want to get away from revolution, we desire to avoid the disastrous upheaval of our stand-still immateriality. Consciousness is ever in advance of nascent life, and gathers up the trophies in her morning march. Voluntarily or involuntarily we move, we change; with our will we have the right of choosing; by the will of another—whatsoever pleaseth him; with our will—in the time of its development; at another's will—at the abrupt point of his decision. The dull, animal instinct of our materialism is no match for the arrow of spiritual intuition that cuts its way through the intelligences of the air. Servitor and Ruler are the respective titles of distinction between negativism and positiviam; and neutrality, if you can catch him napping, may be appropriately stigmatized with the insignia of "Annihilation." Negative or involuntary thought is the drift-wood floating on the current; and somebody, who keeps soul and body together with the *débris* of other people's manufactured productions, will throw out a boom and catch the straggling, water-soaked, dozy pieces of lumber for firewood to keep his family half warm, half frozen, through the bitter cold winter days and evenings. "Economy is wealth,"—it is an old saw—shall we say an immortal saw?—handed down from Pre-Adamite to the present generation as an heirloom. Every man and woman has tried that saw, and, strange to relate, not one has made it work well; it seems to be in capital order, but it has spasmodic fits of stubbornness, or it refuses to be worked at all; in fact, it works and worries everybody who tries it into speculative sawdust, and, finally, into the grave. It defies the whole group of man's mechanical laws. They have tried to find teeth in the handle, and to handle it by its teeth; they have attempted to reverse its action,

but it is still the same curiously-working yet plain-looking old saw. Changed to a cross-cut, perpendicular, or circular it won't work right; they don't understand the first principles of either teeth, gage, or angle. It has taken its "two" and "three cut" inflations out of the rich man's purse and pride, and sawed his bank notes, if not into *shavings*, into queer-looking shingles. Still, we believe in that old saw. The time will come when it will be comparatively subdued in spirit, for intelligence holds the fairy's charm. We are yet too much wedded to the protective policy to be true economists.

"—Some, for fear of want,
Want all their lives; and others every day,
For fear of dying, suffer worse than death."

Time, money, labor, intelligence, and life are laid upon the "saving" altar; and thus we cheat wealth out of everything but a name. There is not a house in the land which has not one room, or the corner of a room, that is pillaged by this pseudo-economy, and the spoils used to fit up another apartment. Go where you will, there is pauperism in some part of that house—dishonest, shortsighted, false economy. The inmates will beg, borrow, steal, do anything but exert themselves to obtain directly, by compensation, the needed thing or thought. They find honesty in the accidentally inverted letter of the law; the truth, in words of double meaning; the right, by comparison with that which is exactly wrong; goodness, in the absence of active evil; duty, in the fulfillment of the limited words of the law or command; education, in the professional teacher; religion, in the "God be merciful to us poor, miserable sinners;" love, in the selfishness of self-devotion and in lust; "our country," in the political name of "our party;" this earth, the

stretch of land between terminus and terminus of the — R. R.; and God, in the impossible, the absurd, and the revengeful. And yet, in all this extravagant waste of power and principle, this misappliance of love and labor, this setting up of false lights, false magnates and prophets, there was never a more auspicious morn than that which is dawning upon us now. The wail of distress, drawn from the universal heart, is the great appeal of Deity to the children of earth: "Come up higher!" The need of light and knowledge, of reason and research, has found utterance in the poverty of individual happiness; and the faint murmur of complaint has grown to a mighty call. Superstition must be dethroned, reason must rule the man; materialism must rise up to meet the level of its noble birth; and spirituality—it *hath ever been the life of all things within our knowledge*. The universal need hath never long to wait; the provident thought of the Creator, quivering, like an aspen leaf, for ages in the human heart, is fast approaching the apotheosis of its struggling hopes, the full redemption of its pledged principles in the vast creation of mankind. Intuition, like a carrier dove, flies in at the open window of our common home with a message from God written on the parchment of materialism, that mortality may learn its divine use—that it may consecrate its homeliest duties to the beauty of holiness.

"Drop down, ye heavens, and pour a flood of glory,
Ye shades of death, the dawn of life approaches;
Mortals shall learn the music of thy thunders,
Infinite Goodness!"

"Rise from the dust, arrayed in God-like beauty,
Oh, Solyma! immortal joys await thee;
See thy lost race, burst from their chains of darkness,
Crowned with salvation."

ROSINE KNIGHT.

ORGANS OF THE BRAIN—HOW DISCOVERED—No. 1.

THOSE who disbelieve Phrenology, and incline to make it contemptible by their sallies of humor, formerly used to say that phrenologists mapped out the head and allotted to one part love of money, to another memory, to another courage, and to another fear, in a manner similar to that in which a county is laid out into townships, and the townships named according to the fancy of the persons

having the matter in charge; and we suppose some of those critics really supposed that was the way in which Phrenology was discovered. Somebody has said so, and they accept it and repeat it, and many believe it.

A correspondent of ours writes from London, Ohio, saying: "I am a confirmed believer in Phrenology as a science, but as an art—and it is most useful as such—I am in doubt as to

one particular, concerning which I now write. That you may fully understand the meaning and scope of my question, I would first state that so far as the brain being the organ of the mind, that size of the brain is the measure of mental power, and that each function of the mind has its special organ in the brain, I am fully satisfied, but I wish to know what reason you have for assigning each faculty a certain location in the brain—why do you locate Comparison in the superior middle portion of the forehead? and why do you locate Form and Color, Tune and Combativeness as you do? A very small amount of observation is sufficient to confirm the phrenological statement that the organs of the intellectual faculties are situated in the front-head, but where is the reason for the special location of each of the organs? I put the question to you, not because I consider you unable to answer it, but because I suppose you can, and that you will be willing to impart to me the desired information, either by letter, through the JOURNAL, or by reference to some work on the subject.

"Yours, truly, M. S. C."

We are thankful to our friend for asking this question, for it gives us the opportunity of saying again that which has already been said before in the JOURNAL, and in other works on Phrenology. We do not always remember that the first principles of the subject ought to be repeated to every coming generation, as the principles of arithmetic, grammar, and geography must be. The very alphabet of all sciences has to be studied by each new set of boys and girls, though in some respects children begin where their parents left off; in matters educational, they are obliged to begin where their parents did, and the old multiplication table is to be learned by each one for himself. He can not inherit such facts. If we were not questioned sometimes on these principles, we should not bring them out often enough, but would suppose our readers were informed, and needed rather to leave the first principles and go on to perfection. Those who are familiar with these topics may pass this article if they wish, and we are satisfied that the uninstructed will be thankful for the opportunity we here afford.

The standard publications are full of the history of the discovery of the different organs, and we shall draw upon these, in some cases perhaps *verbatim*, without troubling the reader or ourselves with quotation marks.

Dr. Francois Joseph Gall, a physician, of Vienna, Austria, afterward a resident of Paris, was the founder of Phrenology. He was born

March 9th, 1757, and died at Paris, August 22d, 1828.

LANGUAGE

was the first organ discovered. From an early age Dr. Gall was given to reflection upon his observations; he not only observed a fact, but his meditative tendency led him to think about the fact. He noticed that each of his brothers and sisters, his companions in play and school-fellows, were distinguished from some other person by peculiarity of disposition. Some of his schoolmates were remarkable for the beauty of their penmanship; some for their success in arithmetic, others excelled in natural history or the languages. The style of composition of one was dry, stiff, and crude; that of another was elegant, easy, and vigorous. Another was connected in his reasonings, and clothed his arguments in the most forcible manner; while another was disjointed, loose, and failed to reason successfully; but their dispositions were equally different, and these differences of disposition and talents appeared to determine the direction of their partialities and aversions, and not a few of them manifested a capacity for employments outside of the range of their instructions. One cut figures in wood or delineated them on paper; some devoted their leisure to attending to the culture of a garden, while their comrades abandoned themselves to noisy games or traversed the woods to gather flowers, or to seek for bird-nests, or to catch and make a collection of butterflies. Of course one would laugh at and undervalue the pursuits of others. They belonged to the same school, had the same general instruction, attended the same church, and yet their ways and tastes were so different as to become objects of criticism and merriment to each other.

The pupils with whom Dr. Gall had the greatest difficulty in competing were those who committed to memory with great facility, and he says such individuals frequently gained from him by their repetitions the places which he had obtained by the merit of his original compositions.

Having changed his residence and commenced to attend another school, he met individuals endowed with equally great talent for learning to repeat. He then observed that his school-fellows so gifted possessed prominent eyes, and recollected that his rivals in the first school had been distinguished by the same peculiarity. When he entered the university he at once directed his attention to the students whose eyes were of this description, expecting, as he afterward ascertained, that they excelled

in getting their lessons rapidly by heart, and giving accurate verbal responses, although many of them were by no means deficient in general talents. This was the first means or hint toward the discovery of Phrenology.

Dr. Gall could not believe that this coincidence of the two circumstances was accidental, and from that period he suspected that the memory of words was indicated by this external sign, and that the pressure of the brain around the arch or ceiling above the eye caused the eye to protrude. He simply observed nature, and although ignorant at that time of the opinions of physiologists touching the brain, and of the metaphysicians respecting the mental faculties, he believed there must be a connection between the brain and this external sign of talent.

We meet with persons whose eyes appear sunken, occasioned by the heavy over-hanging brow. We sometimes find persons whose eyes stand out as if they were swollen, and are very prominent, but they look unnatural in our sight. People sometimes have these prominent eyes owing perhaps to a peculiarity partly of the eyeball, partly perhaps of the integuments by which the eye is surrounded.

In studying this sign of Language, one should look directly below the eye, and if there is a sack-like appearance, if the eye appears crowded downward as well as forward, in such cases he may conclude that the organ of Language is well developed.

Mr. Combe in his "System of Phrenology," at page 329, gives a detailed description of a gentleman in Scotland who suddenly began to speak incoherently, and became quite unintelligible to all those about him. It was discovered that he had forgotten the name of every object in nature. His recollection of things seemed to be unimpaired, but the names by which men and things are known were entirely obliterated from his mind, or rather he had lost the faculty by which they are called up at the control of the will. He was by no means inattentive, however, to what was going on; he recognized friends as quickly as ever, but their names, or even his own, or his wife's, or the names of his domestics, had no place in his recollection. Three years afterward he suddenly became paralytic on the left side. Eight months after that he expired. His brain was dissected, and a diseased condition of the brain was found just over the eye where the organ of Language had been located by Dr. Gall some forty years before. Other similar cases are recorded in Combe's work.

LOCALITY.

Dr. Gall mentions that the passion he had for natural history induced him frequently to go into the woods in order to find bird-nests, that he might catch and tame the young, and although he was expert in accomplishing his objects, yet when he wished to return to the nests he often found it impossible to do so; this difficulty did not arise from inattention, for before quitting the spots he stuck branches in the ground and put marks on the trees, but all in vain; he was obliged to take with him one of his school-fellows, who, without the least possible effort, went directly back to the place, although there might be ten or fifteen new places not familiarly known to them. As this friend of Gall's possessed only ordinary talents in other respects, Gall was struck with his facility in recollecting places, and frequently asked him how he managed to take him back so correctly, when he in turn asked Gall how he contrived to lose himself everywhere. One day, in the hope of obtaining some explanation of this peculiarity, Dr. Gall molded his friend's head, and afterward endeavored to discover persons who were distinguished by the same faculty. A celebrated landscape painter informed him that in his travels it was the custom for him only to make a very general sketch of countries that interested him, and afterward, when he wished to make a more correct sketch, that every tree, every group of bushes, every stone of considerable magnitude presented itself to his mind. He also became acquainted with a celebrated traveler, who led a wandering life and seemed to be anxious to see all places; would travel over the country on foot from house to house, and had an astonishing faculty of remembering all the places he had seen. Dr. Gall molded his head also; and on comparing the mold with his boy friend's, as also with the head of the artist, he observed similar fullness in the three a little above the eye, outward from Individuality and Eventuality. From that time he was led to suppose the talent of remembering places depended on a primitive faculty, of which the organ was situated under this part of the skull, and numerous observations confirmed this inference.

This does not look like mapping out the head and allotting to each part some fanciful name. Some people believe that memory of places depends on the power of general observation, but men who have weak vision will often find their way in the dark, and those who are orderly can go all over a house and find

each article in its proper place without stumbling or being seemingly at a loss. Blind persons generally have this organ large; it is cultivated by the fact of their blindness, and we know some who will go all over a city—New York, for instance; of course they do not go through every street, but have their particular streets, and will walk for miles without making a mistake or asking a question.

To show that this is a special faculty, we may mention that certain animals and insects evince the faculty of remembering places in a very high degree. Carrier pigeons were carried in baskets from Paris to Sedan, and when set free made their way back to Paris. Dogs sent by sea will get back a thousand miles by land. When a man is lost on horseback, if he gives the rein to his horse the animal will generally bear him home. Dogs will chase deer or foxes all day in a strange forest, beyond a river they never before crossed, and when night comes the dogs will lead their masters toward home without delay or mistake. Hunters are wise enough to follow their dogs. We could fill pages with facts of our own knowledge on this point, but most readers forty years of age will recall facts of their own. Bees go miles from their hives, and when they are loaded they make a "bee-line," namely, a straight one, for home, and because bees thus loaded always fly straight, bee-hunters are enabled to find the trees in which the treasured sweet is deposited, and thus wantonly rob the wild bees of life and property.

EVENTUALITY.

After Dr. Gall had discovered an external sign for the talent of committing words to memory with facility, he was not long in finding that it did not indicate every species of memory. Some of his school-fellows excelled in verbal memory, and remembered words which they did not understand, while others were deficient in this respect, but recollected with uncommon facility facts and events; some were distinguished by great memory of places; some were able to repeat without mistake a piece of music which they had heard only once or twice; others excelled in recollecting dates, but none of his associates possessed in an eminent degree all these talents. Subsequently to these observations he learned that professors of mental philosophy before him had arrived at similar conclusions; that they had distinguished three varieties of memory: memory of things, verbal memory, and memory of places. In society he observed that

persons who, though not always profound, were learned, had a superficial knowledge of the arts and sciences, and could speak of them with facility, and he found in them the middle of the lower part of the forehead very much developed. At first he regarded this as the organ of memory of things, but on further reflection he perceived that the name "memory of things" did not include the whole sphere of activity of the faculty under consideration. He discovered that persons who had this part of the brain large, not only possessed a great memory of facts, but were distinguished by prompt conception in general, and had quickness of comprehension, a strong desire for information, a curiosity to know and see everything. He therefore rejected the name memory of things and called it *Educability*, meaning thereby power of observation and memory of facts. This part of the brain comprises now the organs called *Individuality* and *Eventuality*, and were called by Dr. Gall *Educability*. He did not treat of these two organs as separate. We owe to Dr. Spurzheim the correct indication of the functions of each. Just at the root of the nose a prominence of the brow indicates *Individuality*, or the tendency to recognize things. In the middle of the forehead, above *Individuality*, is *Eventuality*, which gives memory of actions or transactions. This gives a desire for knowledge in the form of stories, the power of recollecting events. Lecturers and historians need this fullness in the center of the forehead.

USELESS TREASURE.—A rich nobleman was once showing a friend a great collection of precious stones, whose value was almost beyond counting. There were diamonds, and pearls, and rubies, and gems from almost every country on the globe, which had been gathered by their possessor with the greatest labor and expense. "And yet," he remarked, "they yield me no income."

His friend replied that he had two stones which cost him about ten florins each, yet they yielded him an income of two hundred florins a year.

In much surprise the nobleman desired to see the wonderful stones; when the man led him down to his mill, and pointed to the two toiling gray mill-stones. They were laboriously crushing the grain into snowy flour for the use of hundreds who depended on this work for their daily bread. Those two dull homely stones did more good in the world, and yielded

a larger income, than all the nobleman's jewels. So it is with idle treasure everywhere. It is doing nobody any good. It is right to be pru-

dent and saving of our money when it is for a good, fixed purpose, but to hoard it up for its own sake is more than folly—it is sin.

SUPPLEMENTING AN IMPERFECT EDUCATION.

THE ranks of our thinkers and literary workers are constantly recruited by those who owe success to their own exertions. Many of our most brilliant scientists, our most polished writers, our deepest thinkers are self-made men. Their names are enrolled on no college register, yet they are inscribed high up in the temple of Fame. Howells, the editor of a magazine unrivaled on this continent or across the waters, was his own instructor. Hugh Miller, than whom a brighter star has not shone in the scientific world, had few opportunities of attending schools so-called; his school was nature, and how he learned the lessons she taught, his numerous and admirable volumes well attest. Michael Faraday never graduated at a university, yet he left a name of which all Englishmen are justly proud. The foremost journalist of his age is emphatically a self-made man. Washington and Lincoln lived and died ignorant of Greek and Latin.

The essential elements of intellectual and moral greatness are not the offspring of culture, though without it they are shorn of their strength. The burning thirst for knowledge, the quenchless aspiration to scale the heights of thought and intellectual acquisition, the clear insight, the indomitable will that counts obstacles as stepping-stones, the long patience that can work and wait—these are gifts for which the happy possessor may thank God only. With these and what he can do to direct, polish, and cultivate them he need set no bounds to his ambition. Without these all the universities united can not make a great man of him.

When nature and culture combine to produce their highest and happiest results, we have a Chatham, a Brougham, a Jefferson, a Webster, an Everett.

Notwithstanding the multiplication of schools of learning, there are and will continue to be a great many who must rely upon their own exertions for an education. To aid these we propose to throw out a few hints. There is nothing more important to the student than a thorough knowledge of the English language. The meaning of words and their proper uses must be familiar to him, or the printed page will lose half its significance and fail to make

its due impression upon his memory. He should have at hand for constant reference Webster's Dictionary and Crabbe's Synonyms. If he does not study Latin and Greek he will find a little book called McElligott's Analyzer very useful in acquainting him with a knowledge of the meaning of prefixes, suffixes, and radical words derived from those languages. Mulligan's "Laws and Structure of the English Language" he may study with profit; also "Studies in English," by Schele de Vere; after that, "George P. Marsh's Lectures." Max Müller's "Lectures on Language" and his "Chips from a German Workshop" are full of instruction. Then for more thorough study let him take "March's Anglo-Saxon Grammar and Reader," "Whitney on Language," and "Prof. Haldeman's Works." There is no better way of learning orthography and calligraphy than by carefully copying the pages of a favorite author. These titles of mint, anise, and cummin must not be neglected while the weightier matters of the law receive their proportionate share of attention. The writing of a person when he is absent conveys an impression such as his dress makes when he is present. We can no more forgive a badly-spelled, incorrectly-punctuated, and illegibly-written letter than we can pardon a ragged, unclean, and disordered apparel. In ordinary circumstances, both are alike inexcusable.

To many minds the broad domain of science is more attractive than literature or philosophy; but where to begin the untutored aspirant can not tell. Let the plow-boy begin with the soil he turns. It will take him into the wide fields of mineralogy and geology and lead him to a knowledge of pre-Adamic ages, of cycles, and hemi-cycles, reaching back to the era when the earth was without form and void. It will introduce him to the noble science of agricultural chemistry, and here he will find vegetable physiology inosculating with chemistry, for the sciences are a sisterhood and ever go hand in hand. Or let him study the laws which govern the growth of vegetation, the revolving seasons, the influence of light and heat. This will lead him to a knowledge of the sources of light and heat, and he will naturally study about the sun, the

moon, and the stars. In all the popular sciences text-books are so numerous, so cheap, so profusely illustrated, and many of them so excellent that he who *will* may take of this water of life freely.

In reading history one should always have a pencil in hand, with which to set down important dates and the events that cluster about them. Thus linking fancy unto fancy, or, rather, fact unto fact, memory will retain what would otherwise slip from its grasp. We can not too highly recommend to students in history a little book called "Blair's Chronology," which in a nut-shell, so to speak, contains all the prominent facts of history, arranged in such a manner that they are easily learned, and forgotten with difficulty.

Biography and history should always be read in connection with each other. One can not properly be understood and appreciated without the other. In studying the reign of Queen Elizabeth, for example, one should read the lives of Bacon, of Sir Walter Raleigh, of Shakespeare, of Mary Queen of Scots, and other prominent characters who adorned this period. A good biographical dictionary, an historical atlas, and an atlas of geography are valuable and, indeed, quite indispensable aids in conducting a course of historical reading. It is not the rapidity, but the thoroughness with which one reads that makes the mind rich with the spoils of literature. The eye must dwell long upon the landscape whose image, in all its details, is to be preserved in the picture-gallery of memory. If the manners and costumes, the daily social life, the furniture, the dwelling-houses of the people whose records we are studying can be made to pass before us in vivid coloring, we shall more readily gain a thorough and lasting acquaintance with their history. There are many historical novels, especially those of Sir Walter Scott and Louisa Muhlbach, that may be read with profit in connection with the annals of the times they illustrate. Also historical dramas.

In our schools of higher grade, recitation by analysis has quite superseded the old method of question and answer. The student is required, without any prompting or suggestion, to state in his own words the subject-matter of the lesson in hand. At first, this is difficult, but custom renders it easy, and the habit of analysis once formed is invaluable. In no other way than this can the thoughts of the authors we read be made our own. This method should be applied to all philosophical

studies. It is an excellent plan while reading a work of this kind to have a small blank-book, made of two or three sheets of note paper folded and tacked together, in which a brief analysis of each chapter is set down. When the work is completed the reader can compare and digest the whole, and gain from his analysis comprehensive views of the scope and significance of what he has read better than by reference to the printed volume. Lord Bacon says, in his essay on "Studies," "Reading maketh a full man, conference a ready man, and writing an exact man." One must combine them all to derive full benefit from hours spent with books. It is better that one should talk over his studies with himself than that he should not talk about them at all, for we may set it down that we never really know anything thoroughly that we can not state in clear and intelligible language.

As an introduction to studies in English literature, Shaw's "Manual" will be found invaluable. But this text-book serves only as a guide. Many hints and much assistance may be gained by the student from the perusal of our standard magazines and quarterlies, and from our best newspapers. Not a book of merit or worth comes from the press that is not noticed in these columns, and many of these book reviews are from powerful and able pens. "Hazlitt's Lectures on the British Poets" and "Reid's British Poets" may be read with profit, but these are mere guides. The student should read the poets with his own eyes, read and re-read till the very soul of the poetry stands embodied before him. Not one or two or a dozen readings of "Hamlet" or "Paradise Lost" will bring out all their wisdom and beauty and deep significance. The master-pieces of master minds can not be fully understood and appreciated but by long and careful and repeated study.

If Divine philosophy enchants the student, and he longs to drink deep from those perennial wells that have refreshed and delighted generations of men, let him procure a translation of Plato, and read and re-read Phaedo and Phaedrus and Gorgias and the Banquet. Let him turn the pages of Bacon until he is imbued with the spirit that made Francis Verulam the foremost thinker of modern times. If he delights in ethics let him peruse "Mackintosh's History of Ethical Philosophy." These works will not only instruct and furnish his mind, but introduce him to whatever is ennobling and imperishable in ancient or modern philosophy.

If "chill penury" prevents the student from buying books, let him borrow. If he needs advice in conducting his researches for knowledge let him not hesitate to ask any one who is able to give. Narrow is the soul and ignominious the spirit that knows the unbounded delight, quaffing unstinted the waters of knowl-

edge, yet refuses all the aid in its power to other thirsting souls.

Should any of the hints we have given aid the struggling aspirant for a liberal education, and he desire further suggestions of the same character, letters addressed to the editor of this Journal will meet a prompt response. L. E. L.

Department of Religion and Psychology.

Know,
Without or star, or angel, for their guide,
Who worships God shall find him.—*Young's Night Thoughts.*
The soul, the mother of deep fears, of high hopes infinite;
Of glorious dreams, mysterious tears, of sleepless inner sight.—*Mrs. Hemans.*

THE ONE-EYED CONDUCTOR.—ANOTHER EXPLANATION.

THE article in the last (October) number of the PHRENOLOGICAL JOURNAL, entitled "The One-Eyed Conductor," has recalled my attention to the many cases of this class of phenomena which are so often occurring, and many of which find publicity through the columns of our periodicals and dailies. It is a good sign that public opinion is now sufficiently liberalized to tolerate their publication, as their constant occurrence should receive from all educated persons some consideration as to their cause and character.

The "offered explanation" treats the subject from the scientific or, perhaps more properly, from the material standpoint, and does this ably; but in my humble opinion the points of the narrative do not receive the close attention which they require.

I regard it as a weak assumption when physiologists claim that every impression makes a lasting impress upon the nerve cells of the brain, when the nerve cells themselves, as they admit, are momentarily dying—being removed and replaced by others.

If the impressions made are only upon these cells, and these cells disappear, how can they maintain that the succeeding cells, being newly-organized matter, can possibly retain, in all their freshness and force, the original impressions?

The entire cells disappear, not atom by atom. The microscope proves that they melt away like the cellular substance of the honey-comb when in contact with heat. Is it not evident that these cells perform only a part in the material process of receiving

these impressions in connection with the optic and auditory nerves, and other portions of the nervous and cerebral structure? And is it not probable, also, that the combined action of these different parts is the effective and necessary means of transmission of sensation of outward things to that inner soul or spirit which thus is enabled to take cognizance of their existence and presence?

That these cells are the inner works of the material arrangement for transmission of sensation, I have no doubt; and their rapid dissolution, being unlike any other similar process in the cerebral or nervous matter, points to the probability of the forces disengaged during this process being the elements which form the connecting link between the matter of the brain and the in-dwelling spirit.

If this is correct, the cells receive the impression while in the process of dissolution, and the impression which can not be wholly immaterial mingles with the disengaging forces or elements evolved, and thus the chasm is bridged between matter and spirit, and the latter becomes the ultimate receptacle of the impression, with which it remains, if the spirit be immortal, perhaps through the ages of eternity.

Science has penetrated to the border-land of spirituality. There her course is for the present arrested; but the day is not far distant when she will discover the means of passing over, and glorious will it be to witness the bounding steps with which she will tread the newly-discovered territory.

The writer of "Offered Explanation" seems

to admit "that angels, good and bad, have access to our minds, our thoughts, and mental operations," for he says, "if it be true, they may induce us to follow particular trains of thought." If this be so, it certainly does not require any large addition to our faith to believe that they may so magnetize us or influence us as to render themselves, under favorable circumstances, visible to our senses, and more especially was it easy to do so in the instance related, where we can easily imagine that the spirit of the conductor might, in his anxiety to save the life of the lady, find his own conditions available, while, at the same time, her conditions, arising from weakness and exhaustion, were equally favorable. This would render him magnetically positive to her, and he might be able to accomplish that which, under ordinary circumstances, he would be unable to do.

It is strange that divergent as science and theology are at this time upon most points, they mutually support each other in repudiating any belief in spirits returning to earth, and this when the proofs of frequent returns run all through the Bible; when instances are related by the majority of historians, and have been accredited by the great and good of all nations, and when innumerable authentic instances are occurring in our midst at the present time.

Deprive the Bible of this element, and the Christian's faith becomes as devoid of soul nourishment as worthless chaff. The whole history of Christianity proves that in the proportion the conviction of this truth enters into religious belief, the latter becomes a living source of Christian strength and heroism. The appeal to its truth finds entrance to the inner consciousness of the great majority of mankind, and it is only when the minds of men have become materialized and inaccessible to these proofs that they reject the spiritual element which gives religion all its claims to the attention and confidence of mankind.

It is this repudiation of the foundational principles of religion that renders Protestantism the formal and lifeless profession which it is to-day. Catholicism is wiser, and it does not require a mind of the largest capacity to see that it is to the preservation of the belief in the communion of spirits with mortals that this great denomination is indebted for its green old age.

Religion without this element is a structure without a foundation, a system without a basis; and Protestantism, in yielding it to material science, has abdicated its strongest claim upon the convictions of men, and renders itself helpless for defense.

JEROME ROSS.

SWEDENBORG'S WRITINGS.

[As a matter of information concerning the doctrines and beliefs of a considerable body of sincere worshippers, we cheerfully give space to J. E., a zealous New Churchman and physician, who tells us something more about Swedenborg and his teachings. Readers are expected in this, as in all other matters, to exercise their own judgments, free, if possible, from prejudice, bigotry, and superstition.]

EDITOR PHRENOLOGICAL JOURNAL—I have noticed in your periodical an advertisement of the writings of Emanuel Swedenborg. As, doubtless, most of your readers have never read any of his writings, a brief statement of some of the prominent ideas contained in them may not be uninteresting to such.

Swedenborg lived and wrote about a century ago. He was a distinguished philosopher before he commenced writing on theological subjects. Most of his theological writings were published anonymously, only in one of his last works, "The True Christian Religion," at the earnest advice of his friends, did he add to the

title of the work his name, thus: "By Emanuel Swedenborg, Servant of the Lord Jesus Christ." It was an important idea with him that men should receive the revelations made by and through him neither on authority nor persuasively, but because they perceive them to be true. Yet no prophet, seer, or disciple has more emphatically proclaimed his mission, for he says: "I have been called to a holy office by the Lord himself. I can sacredly and solemnly declare that the Lord himself has been seen of me, and that he has sent me to do what I do, and for such purpose he has opened and enlightened the interior part of my soul, which is my spirit, so that I can see what is in the spiritual world, and those that are therein, and this privilege has now been granted to me for twenty-two years. But in the present state of infidelity can the most solemn oath make such a thing credible or to be believed? Yet

such as have received true Christian light and understanding will be convinced of the truths contained in my writings, which are particularly evident in the book of 'Revelations Revealed.' Who, indeed, has hitherto known anything of consideration of the spiritual sense of the Word of God, the spiritual world, or of heaven and hell, the nature of the life of man, and the state of souls after the decease of the body? Is it to be supposed that these and other things of like consequence are to be eternally hidden from Christians?"

In a letter to the King of Sweden, with characteristic simplicity and boldness, he said: "When my writings are read with attention and cool reflection (in which many things are to be met with hitherto unknown), it is easy enough to conclude that I could not come to such knowledge but by a real vision, and converse with those who are in the spiritual world. I am ready to testify with the most solemn oath that can be offered in this matter, that I have said nothing but essential and real truth, without any admixture of deception. This knowledge is given to me by our Saviour, not for any particular merit of mine, but for the great concern of all Christians' salvation and happiness."

When asked why a philosopher was chosen to this office, he replied, "To the end that the spiritual knowledge which is revealed at this day might be reasonably learned and naturally understood, because spiritual truths answer unto natural ones, inasmuch as these originate and flow from them, and serve as a foundation for the former."

To the Swedish clergyman who visited him a short time before his death, and who urged him to recant what he had written if it was not true, he replied, with great zeal and emphasis: "As true as you see me before you, so true is everything I have written; and I could have said more had I been permitted. When you come into eternity you will see all things as I have stated and described them, and we shall have much to discourse about with each other."

He claims to have had open intercourse with the spiritual world, which world is not far distant, but immediately associated with the natural world, and to have conversed with its inhabitants face to face, as man converses with his fellow-man here, for over twenty-seven years; and he claims to have had advantages over all other men who have ever conversed with spirits, inasmuch that he was specially permitted by the Lord and protected and guid-

ed by angels that he might view the heavens and hells, and be able to reveal to men the state of man after death; without such permission and protection he has shown that if he had had open intercourse with spirits, he would simply have come in contact with his associate spirits, who are like himself, and could have received no reliable knowledge of the ultimate destiny of man.

But all this was but little more than incidental to his chief mission. He claims to have received from the Lord the truths of a new dispensation, including the true meaning or spiritual sense of the sacred Scriptures, unfolding it in strict accordance with the great and universal science of correspondences between natural and spiritual things. In the light of the spiritual sense, it is claimed that all of the apparent contradictions of the letter disappear, and it is demonstrated to man's intellectual perceptions beyond the possibility of a doubt that in the Bible we have special revelations from God to man. Swedenborg assures us that he received nothing of the doctrines of the New Church, or of the spiritual sense of the sacred Scriptures, from any angel or spirit, but from the Lord alone, while reading his Word. He most solemnly declares that he witnessed the last judgment, in the spiritual world, during the year 1757, and he anticipated, as a result of that judgment, that mankind would thereafter be in a greater state of freedom on religious subjects than before it, as a vast cloud of evil spirits who obscured the descent of heavenly light were removed from contact with men in the spiritual world at that time. All things were to be made new, in fulfillment of the prophecies in regard to the Lord's second coming, which was not to be a personal coming in the natural world, but a coming in the clouds of heaven (not of earth), or in the literal sense of his Holy Word, to which the natural clouds correspond. They thus correspond because we receive spiritual light and heat or divine wisdom and love through the letter of the sacred Scriptures, as we receive natural light and heat through the natural clouds.

Such are a few of the startling claims of this distinguished writer; and those who acknowledge that his writings contain a true revelation from Jesus Christ to the men of this age, believe that all the wonderful changes for the better which are taking and have taken place within the past century, in religious views, and all the recent discoveries and inventions, are the result of Christ's second coming; and, still

further, they believe that at present we behold but the dawning light of the New Jerusalem, which is to be the crown of all dispensations. "Light, more light still," is to pour in upon us from the world of causes. More wonderful things and changes are ahead of us in the near future, for the day is dawning when a "knowledge of the Lord is to cover the earth as the waters cover the deep." Freedom and justice are to prevail; the dark shadows of a dreary night of spiritual and civil despotism are passing away; the world is moving and will continue to move upward and onward, and the rising sun of civil and religious freedom is not to go down, so sure as the Lord reigns. J. E.

BRAIN-WAVES.

ARE these things the product of magnetism? Have they relation to clairvoyance? A. F. asks the *American Land and Law Adviser* the following interesting questions:

"What influences are those that work upon the mind, to call to memory one's friend, his name, his face, his very speech, when one is thinking of him least, and in a moment afterward he appears in his proper person?"

"This question was pleasantly suggested yesterday when I was walking down the street. I suddenly thought of a friend whom I had not seen for many months, and almost the next moment I had the pleasure of speaking with her.

"This, no doubt, is an every-day occurrence. I myself have frequently had similar experiences, especially in connection with a gentleman, who is an intimate friend of mine; he almost invariably greets me, when I call upon him unexpectedly, by saying, 'I thought of you not a moment since.' A gentleman relates that when young he had a boon companion, whom he always knew was near when he had a sudden thought of him.

"If there be such influences at work as can interrupt a train of thought whether voluntary or involuntary, and intrude another as foreign to the first as Japan is to America, and that with a suddenness often startling, would it not be a fine thing to understand the principles that underlie them? Perhaps they may consist of some kind of unseen telegraph, which, if known, might be improved upon so that messages could be sent at will.

Just think of it: private telegraphic communication with all your friends, and enemies, too, for that matter! What messages of love would pass! Love-sick swains, too backward to propose, or prevented by an indescribable sensation, would then have no trouble; and the reply, so sweet, so gentle, might be sent while the blushing maid was peeling apples for the pies, or washing the family linen. And then how easy it would be to dun a debtor: every moment, every hour, if you wished, you might refresh his unwilling memory. A thousand messages might be sent while the errand boy, of old, stood by the old woman's stand wishing for a pint of pea-nuts.

"Can not some one solve the question, and make the human family happy, by saving postage rates, and shoe leather, too! I can not say whether the discovery would be patentable, but it seems to me that the honor attending it ought to be sufficient pay."

[When it shall be explained what is life, what is thought, and what is soul or spirit, on scientific principles, we may be able to explain what is clairvoyance, brain-waves, thought-reading, and other mysteries. Believing or disbelieving the possibility of an "unseen (mental) telegraph," proves nothing.]

RELIGIOUS STATISTICS.

THE statistics of religion for the United States, just completed at the Census Office, show the total number of church organizations upon the 1st of June, 1870, to be 72,451; the total number of church edifices to be 63,074; the total church accommodation to be 21,659,562; and the aggregate value of the church property to be \$354,429,581. The statistics of church accommodation for the principal denominations are as follow:

Church.	Accommodation.	Value of Church Prop.
Baptist.....	3,300,135.....	\$41,607,998
Presbyterian.....	2,698,344.....	53,265,360
Congregational.....	1,117,213.....	25,069,096
Methodist.....	6,528,309.....	69,854,121
Episcopal.....	991,051.....	36,514,569
Protestant.....	14,694,851.....	\$226,311,636
Roman Catholic.....	1,990,514.....	60,985,566

As the above specifies church accommodation, but not the number of the membership, hardly an approximate estimate of the numerical strength of the denominations can

be made. Many of the Protestant churches have not half members enough to fill their houses of worship; but perhaps it might be assumed that the people nominally adhering to each denomination would fill the churches

if called together. On the other hand, all who are of the Catholic faith are members of the church; and it is probable that their membership, which includes their entire population, would more than fill their churches.

Department of Our Social Relations.

Domestic happiness, thou only bliss
Of paradise that has survived the fall!
Thou art the nurse of virtue.

A LITTLE GIRL'S FIRST IMPRESSIONS OF HENRY WARD BEECHER

BY ALTON CHESWICK.

PERHAPS the most attractive concomitant of that *greatness* which so many strive for and so few obtain (we use the term in its usual acceptation), is the fame, or its even more agreeable synonym, popularity, that usually attends it. To be the observed of all observers, and the absorbing topic of conversation far and wide, is the highest ambition of many, and, no matter what we may say to the contrary, is exceedingly agreeable to us all. Perhaps there is no man who has had less cause to complain of a lack of these popular attentions than he whose name heads our article; and in making him the theme of a discussion, we can lay no claim to originality, as we but follow the example of hundreds. Adulation, commendation, aye, and flattery, have poured in upon him in one long-continued, unabated tide of sweetness; but a banquet of sweet things, however good in themselves, soon palls upon the taste, unless enlivened by something of a more pungent character. We, therefore, propose to undertake the office of supplying this deficiency after a manner, and offer a little spice—just by way of variety.

A little girl's first impressions of Henry Ward Beecher—the great Henry Ward Beecher—what should they be, what *could* they be, but flattering in the extreme to the object which inspired them? Regarding the man through the atmosphere of his popularity, we can well imagine how a little girl, especially one of a romantic turn of mind, would be impressed by her first sight of him; how she would admire the stateliness and dignity of his port, the classic outline of his

features, the benignant suavity of his manners, and, which is by no means an unimportant feature, especially, as in this case, when the embellishment of mustache and beard is wanting, the luxuriant growth of his hair—in short, the utter perfection of which he is the embodiment, at least so say the ladies of his congregation; and if *they* don't know, who does?

We all know and appreciate the value and importance of first impressions, how long they retain their power and vividness, and how they modify every subsequent idea we may form of the individual who has caused them. And next in interest and importance to us to the impression we may have received, is that which has been produced upon others. "How did he impress you?" is the question often put to another concerning a recently-formed acquaintance; and when the subject of these impressions is an individual who claims the attention and awakens the enthusiasm of thousands, this question is put with livelier interest, and the information obtained is all the more desirable and interesting.

In a conversation which we had some time since with the little girl—now a young lady—whose first impressions of the great man we propose to divulge, she entertained us with an account of her experience in the matter, which seemed to us so unique, so different from anything that we have ever heard, or that is usually expressed of Mr. Beecher by his numerous friends and admirers, that we could not refrain from laying it before the interested public at large, feeling sure that the good company in which we

have placed ourself would insure us the instant and respectful attention of all whose eye should light upon the heading of this article. We give the story, as nearly as we can recollect, in her own words, feeling certain that only thus could we do justice to it.

"Some years ago, when I was a little girl of fourteen or fifteen," said the young lady [she is not, you perceive, one of the rising generation, being lamentably deficient in the spirit of "Young America," whereby its possessors are matured at the advanced age of ten or twelve], "I was visiting at the residence of a friend in the 'City of Churches,' not far from the church of the great organ and the great preacher. I had never seen or heard Mr. Beecher, though of course—who has not?—I had heard of him, and, by the aid of some indifferent photographs of him which I had seen, and for whose deficiencies I made all due allowance, I had drawn mentally a fancy portrait, in strict accordance with my own ideas and taste, which I hoped ere long to have an opportunity to compare with the original, as he was a frequent visitor at the house where I was staying. Nor was the opportunity long deferred, though, as you will see presently, I did not in the least profit by it.

"One evening, while my younger sister, who was with me, and the youngest daughter of our friend were seated in free-and-easy childish fashion upon the carpeted floor of the hall, amusing themselves with a game of marbles, and I was reading in an adjoining room, occasionally raising my eyes from the page to enjoy the fun that was going on outside, I was suddenly aroused by the sound of the hall-door opening, a heavy step in the vestibule, and gruff, masculine tones mingling with the voices of the children. Looking up, I saw in the hall what appeared to be a tall, rough-looking man, who was in a stooping posture, with his hands resting on his knees, watching the children at their play, and making some observations upon it. Presently he squatted—that is the only term that will accurately describe the attitude he assumed, as it struck me—and taking up one of the marbles, attempted to propel it in accordance with the rules of the game, which the children were eagerly explaining to him. The marble slipped from his awkward fin-

gers and rolled wide of the mark, and, as one of the children ran to fetch it, he rose to his feet with a grunt of disapproval at his failure. From the roughness and clumsiness of his general appearance and movements, the gruffness of the tones of his voice, and a certain countrified air he seemed to carry with him, I took him to be an ordinary farmer or marketman, just arrived in town, and who had come for the purpose of business with the master of the house, who was a provision dealer. After a momentary feeling of surprise that he should have entered at the hall instead of the basement-door, and that he should be so familiar with the children, but thinking him too insignificant a personage to waste a second thought upon, I returned to my book.

"I will remark just here that, at that time, I was very strongly imbued with the spirit of aristocratic exclusiveness. I recognized two very distinct classes of men; and although kindly disposed toward and interested in all, I would tolerate nothing that looked like presumption from those whom I considered my inferiors. In justice let me say that I acknowledged no social distinctions that were founded upon wealth alone. My ideas upon these subjects were scarcely American, much more English. Birth, social position, and occupation were of value to me as helping to decide the relative importance of an individual; but the best and highest criterion of worth with me consisted in education and refinement, the possession of these constituting the most rightful claim to both social position and distinction.

"Imagine, then, my astonishment and indignation when, after a few more words to the children, which, as I paid no attention to them, I did not hear, the fellow outside coolly turned and walked into the room where I was sitting! A nearer view of him did not serve in the least to prepossess me in his favor, but rather to deepen the impression I had already received. Though unable, from near-sightedness, to distinguish his features very well, I could see that they were darkened and roughened by a beard and whiskers in their most disagreeable stage of existence, viz., when about four or five days old; that his rough-looking great-coat was heavy with moisture, for it was drizzling

without ; and that his boots were coarse, and looked as if they might be muddy. Some sort of head-gear covered his head, which, however, he had the grace to remove shortly, but what it was I do not remember exactly ; but this I know, that it was a long way removed from the glossy and fashionable tile worn so gracefully by society's gentlemen, and I made up my mind, without a moment's hesitation, that if he were not the farmer or marketman I had supposed him, he must be some one's coachman, or possibly a hack-driver. Then I recollected that I had heard the lady of the house intimate her intention of going out that evening, and I no longer doubted but that she had ordered a carriage, and that this man had called to know when he should bring it around, or something of that sort. But why did not the stupid, blundering blockhead go to the lower door, I asked myself, where he could see one of the servants, and have his business attended to at once ? whereas now his presence in the room seemed to be known to no one but the children, who, having resumed their game, paid no further attention to him. I was about to suggest to him the propriety of so doing ; but my indignation reached a climax which left me actually speechless, when, after a mumbled remark, which might have been intended for the tables and chairs, the walls, or myself, whichever might choose to appropriate it, but which I passed by in dignified silence, he fingered the various little nick-nacks upon the table for a moment, and then crowned his impudence by coolly seating himself, with an air of one who feels perfectly at home !

"This was too much ! That I, the daughter of a professional man and a gentleman, should be seated on terms of social equality in the same room with such a man was more than I could patiently endure ; and, feeling terribly insulted, I rose hastily to quit the room, since he seemed to have taken possession of it, when I suddenly recollected that it might not perhaps be safe to leave him alone in a room where so many pocketable valuables were lying around loose. It seemed, then, that I *must* remain ; but I compromised the matter by maintaining an air of impenetrable reserve, and haughtily withdrawing to the farthest possible corner of the room, but, keeping a sharp lookout upon him, debated

in my mind what I should do next. I was not long in coming to a decision. I would ring for the servant to show the fellow out, or at least into a part of the house more befitting his station—impossible any longer to endure his insufferable presumption. I was about to carry this design into execution, when it again occurred to me that it was possible that a servant might have seen him come in, or even have admitted him, as I had not observed the manner of his entrance ; and in that case any interference from me would be uncalled-for. More than five minutes had already elapsed since he first entered, quite time enough, it would seem, for the mistress to have been informed of his intrusion. Still, rather than take an unnecessary liberty in the house of another, I concluded to wait a few moments longer, when, if something decisive were not done, I felt that I must really take matters into my own hands.

"Before the time that I had fixed upon had elapsed, however, I was relieved by hearing the rustle of the lady's dress as she approached ; 'and now,' thought I, 'this fellow will get his dismissal in a hurry, and be taught a lesson, I fancy, that he will not forget very soon.' But if I had been astonished before, my amazement was unbounded when, far from manifesting any displeasure or even surprise at the intrusion, she advanced pleasantly to meet the stranger, who rose at her entrance, and, greeting him by a name which from my corner of exile I did not catch, shook hands with him cordially, and immediately entered into an easy, affable conversation, of which, as it was carried on in a low conversational tone, I caught very little. Here, then, was a mystery ! What did it all mean ? This lady, though somewhat democratic in her views, and as far removed as possible from purse-pride, would nevertheless, on ordinary occasions, have been the last one to overdo the matter of courtesy in her intercourse with a stranger, or tolerate from him any undue freedom. It was evident that this individual was no stranger to her ; but whence arose that wondrous cordiality, which was seldom manifested save toward her most intimate and cherished friends, and which, under ordinary circumstances, she was much too frank to simulate if she did not feel it ?

"Under ordinary circumstances! Yes, but these might be extraordinary—must be so, in fact—none other than the most extraordinary circumstances, would give such a man a passport to, and secure him a polite reception in a sphere where otherwise he would not be tolerated for an instant. What unrevealed mystery was hinted at by all this? What strange connection had existed between them in former times, and which, still wielding its influence, had secured for him the present friendly intimacy? What motive could it be that was so powerful as to compel this lady, usually so frank and outspoken, to conceal her real feelings in the case, and not only to endure, but even to affect to welcome with cordiality, this disagreeable intruder?"

"I was at this period tolerably well read in the better sort of sensational newspaper literature of the day, and, with such a start as my fancy had already received from what I had seen and heard, I was not long in perceiving in it all the sure indications of a romance in real life, with a most promising mystery to unravel at my leisure; and I was soon deeply engaged in working it out, in accordance with the most approved models. It was not a great while ere I had concocted a number of remarkable plots, and as many possible and startling solutions of the mystery, wherein vice and cupidity, having got the better of youth and trusting inexperience, were determined not to relinquish, or were unable to relinquish, the advantage thus acquired, and so continued to maintain their ascendancy by the potent agency of terror—the blame resting now upon one, now upon the other, now upon both of the parties concerned, etc.

"I was busy reviewing and commenting upon the last of these efforts, when my attention was aroused by the bustle of departure. The children had left their play, and, with the little ones of the house, were gathered around the stranger, who was about taking his leave, bidding an affectionate adieu to the children, and seeming altogether quite at his ease and in very good spirits. Several times during the parting salutations he was addressed by a title which seemed very suggestive of a name grown quite familiar to me by its frequent mention at home

and abroad, by tongue and pen; but though I listened attentively, I was unable to distinguish it with sufficient clearness to justify me in supposing that I had heard correctly. A lurking suspicion, however, entered my mind, which, although dimly defined, was yet sufficient to dispel somewhat the glamour of my recent imaginings, and to present matters in a somewhat different light, but which only served to heighten my now thoroughly aroused and hitherto baffled curiosity. The moment, therefore, that he had fairly gone, I turned to the little girl, choosing to obtain my information, if possible, from her, with a hurried, 'Who was that man?'

"'Why, that was Mr. Beecher,' was the reply that greeted my astonished ears.

"'That Mr. Beecher!' I gasped; 'but'—after a moment's reflection—'you don't mean Henry Ward, of course!'

"'Yes; I believe that's his name,' she replied, carelessly. 'Why, don't you know?' she continued, as I stood silent in open-mouthed perplexity, 'the great preacher! You've heard of *him* often enough, I should think.'

"'And *that* was the man!' I said.

"'Yes, certainly! Why, what's the matter with you?'

"Matter enough, I should say! Shades of Plymouth Church, what a *denouement* was this! Here for full five minutes I had enjoyed the privilege of a *tête-à-tête* with the great man, and, so far from appreciating the honor, I had been indignant at his intrusion, had entertained grave doubts of his honesty, had resented his continued presence as an impertinence, had stood most haughtily on my dignity while he remained, and had even been upon the point of having him shown the door! Suppose that I had done such a thing! Suppose that I had attempted it even! I leave the result to your imagination! If Mr. Beecher's eye should chance to light upon this article, he will know for the first time what a narrow escape from ignominious expulsion he had on that memorable occasion.

"From subsequent conversation concerning him which took place during the evening, I learned that he had just returned from his farm in the country, and had stopped here, as I understood, on his way home; which

may serve to account for his rough and travel-stained garments and the unshaven appearance of his beard, though I have since come to the conclusion that somewhat of the impression he produced upon me arose from my own short-sightedness—in more ways than one, perhaps.

"Not a great while after this occurrence I had the pleasure of a formal introduction to Mr. Beecher; and, in spite of the affront which he had put upon me, I actually condescended to shake hands with him myself! The impression which I received at this second interview was somewhat more favorable than that which had been produced by the first—decidedly more flattering to his personal appearance. A closer inspection than I had hitherto enjoyed dispelled many of my previous illusions; but—I beg Mr. Beecher's pardon, but 'tis nevertheless true

—whether it arose from a prejudice formed and strengthened by the firm conviction under which I was laboring at the time of my first interview or not, he has always had somewhat of a bucolic appearance to me, and I have always been able to perceive a something in his personal appearance which, under the circumstances which I have just indicated, might form a basis for the mistake I then made. I am aware that I do not follow the multitude in this opinion, but such is the power of first impressions, however erroneous."

Mr. Beecher has often sat for a portrait, both in pen and pencil; but we venture to assert that it has seldom been painted after this fashion by a lady. Variety, however, is charming, and we would present this to the consideration of himself and his numerous admirers—merely for a change.

ODE TO THE NIGHTINGALE.

ADAPTED FROM THE SPANISH.

WHERE lofty trees outstretch their pleasant shade
High o'er a grove with odorous flowers inlaid;
Where vine plants twine themselves in soft embrace,
And fragrant zephyrs shed refreshing grace,—
There, hushed from the world, thy song is heard,
Thou soul-inspiring, heaven-sent, minstrel-bird,
Sweet nightingale!

And when unto thy lofty halls I stray,
My raptured soul soars with thy thrilling lay,
'Till borne in ecstasies of heightening bliss,
It seems at last to meet heaven's smiling kiss;
It tastes fair joys the world can never feel—
Joys which thy music only can reveal,
Sweet nightingale!

While hearkening for thy song sweet sounds I hear
Amid the forest trees that murmur near;
The beaded dew, like tear-drops, patter slow,
The quiet summer wind breathes soft and low;
But when thy voice, with swift redoubled trill,
Breathes forth, all other sounds are mute and still,
Sweet nightingale!

To thee I listen as thou sing'st adieu
To parting day slow sinking from the view;
To thee I listen while approaching night
Receives thy burst of homage and delight;
And then the stars their glinting fires upraise
To hear thy song and cheer thee with their gaze,
Sweet nightingale!

Go on; for thou art nature's own guitar!
O, let thy flowing strains resound afar!
Thou, thou alone can'st pierce my inmost heart,
And to my tortured soul true joy impart;
Thou, by some secret power as sweet as strong,
Doth make my thoughts the reflex of thy song,
Sweet nightingale!

Sing on! my soul embodied in thy lays,
Which now the loving wind to heaven conveys,
Shall soar with them to that celestial seat
Where they can breathe in unison complete,
Where sorrow's wings are powerless to rise,
And heavenly joy all earthly ill dodges.
Sweet nightingale! JAMES BARNLEY.

MRS. ANNA L. BARBAULD.

MRS. BARBAULD is well known as a writer of thoughtful and beautiful poetry, but her claims to grateful remembrance as an educational reformer in the days when education among all ranks was much neglected, are not so generally understood as they deserve to be. As scholar, teacher, writer, she was a benefactor to society.

In point of organization she was, as appears in our portrait, finely constituted; the temperament contributing facility and clearness to the mental processes and at the same time a good degree of elastic fortitude. She was by nature frank and candid, yet exceedingly delicate in feeling. The unusual fullness of the upper and back part of the head

indicates a spirit keenly alive to the shafts of criticism and detraction, a disposition of reserve, and yet a marked fondness for the association of kindred natures. There is the evidence, too, of strength, but it is the strength which controls self, and imparts that personal dignity which is at once so unassuming and

court, in Leicestershire, where, in addition to preaching to a small congregation, he kept a select boys' school. There is something remarkable in little Anna's mental experience. She learned to read fluently at the earliest age ever recorded—two years and a half. If she had not had sensible parents she would



gentle, and yet is deeply impressive. She was a lady of rare mental qualities, in combination equally rare.

Anna Letitia Aikin, born 1743, was the daughter of Dr. Aikin, a learned Dissenting minister, at the village of Kibworth-Har-

have been spoiled by admiration; as it was, she did not know that her infant attainments were anything unusual. She would have been very dull and lonely but for the pleasure she took in books, for the only childish companion she had was a brother more than two years younger than herself. The village sup-

plied no playmate of her own age, and she was never suffered to associate with the pupils of her father. Her brother was sent away at eight years of age to a distant school, Dr. Aikin thinking that absence endears home; and therefore the little child grew up to her sixteenth year a studious, gentle girl, rendered very shy by having no companions of her own sex and age. Such a training would be generally considered undesirable, but if it is judged by results, it suited her. She made great progress in other attainments; learned to love good books, and the conversation of intellectual people. Under her mother's care she also became skilled in household management.

Dr. Aikin, in 1758, removed to Warrington, in Lancashire, having accepted the office of classical tutor in a prominent academy there. Of course the circle of his daughter's acquaintance enlarged; but her habits of reserve made her so shy, that her mental attainments were not known out of her own family, though all saw that she was beautiful in person, and very retiring in manners. Amid her books and her household duties she grew to womanhood, and it was to her a very great joy when her brother, having completed his medical studies, returned to Warrington, and settled there as a physician. To him she had confided her love of literature, and her first efforts at poetic composition. He very justly thought these productions of her pen so good, that he overcame her great reluctance, and a volume of poems was published in 1773, which so completely vindicated her brother's high estimate, that four editions were called for in twelve months. A remarkable fact in a time when there could not be said to be a large reading public.

From this time her seclusion, though not her timidity, had ended. She was sought out by eminent people, and recognized as a gifted and leading mind. Her father's pursuits had given her considerable experience of methods of education, and she directed her mind to the simplifying of the then modes of instruction. She published a volume of miscellaneous pieces in conjunction with her brother. Mrs. Montague and other ladies of prominence asked her to commence a college for the education of girls. It was

considered a very daring project then, and Miss Aikin, after much deliberation, declined to enter on the plan, from the humble estimate of her own attainments. In all the solid branches of a liberal education she was skilled, but she considered that her want of fashionable accomplishments, and her embarrassed manners, unfitted her for the tuition of the young of her own sex.

In mature life she married the Rev. Rochemont Barbauld, descendant of a French Protestant family. This gentleman had been a student at Warrington, and held the doctrinal views of Dr. Aikin. The union was one of sincere affection, and happily Mrs. Barbauld was induced to enter on the work of the early training of boys.

At Palgrave, in Norfolk, a school for gentlemen's sons was commenced, which became noted for its pupils then and afterward. Some of the most eminent men of the early part of the present century as Lord Denman and Sir William Gell, the antiquary, were educated there.

Mrs. Barbauld had no children of her own, but she adopted her nephew Charles, and for him and his sister Lucy those charming works, "Early Lessons" and "Hymns in Prose" were written. Now we have a countless multitude of good books for the young; then they were very few. After some years of unremitting and successful effort as an instructor, both she and her husband began to feel the need of more rest than their pursuits had permitted, and Mr. Barbauld removed to Hampstead and ministered to a small congregation. Here it was that many of Mrs. Barbauld's most beautiful hymns were written. She also helped her brother in that most successful work for young people, "Evenings at Home"—fourteen of the pieces being from her pen. This may justly claim to be the first attempt at introducing scientific topics in an easy, agreeable manner to the youthful reader.

In the hope of cheering her husband who suffered from depression of spirits, she made many excursions in England and on the Continent, and there is no doubt her cheerfulness and tender care alleviated much his malady. He died in 1808 in the thirty-third year of their married life.

In 1811 she wrote a poem that was thought

to take too gloomy a view of public affairs, and it was condemned in a severe, if not bitter, spirit. Without resentment, but certainly pained by the censure of her critics, she ceased to publish, though not to write.

The brother who had been her life-long friend died in 1822, and in rather more than two years after (March, 1825,) she peacefully passed away in the eighty-second year of her age. One beautiful hymn, written on the death of an aged relative, admirably describes the final close of her own long and useful life.

How blest the righteous, when he dies !
When sinks a weary soul to rest,
How mildly beam the closing eyes ;
How gently heaves the expiring breast !

So fades a summer cloud away ;
So sinks the gale when storms are o'er ;
So gently shuts the eye of day ;
So breaks the wave along the shore.

A holy quiet reigns around,
A calm which life nor death destroys ;
Nothing disturbs that peace profound
Which his unfettered soul enjoys.

Farewell, conflicting hopes and fears,
Where lights and shades alternate dwell !
How bright the unchanging morn appears !
Farewell, inconstant world, farewell !

Life's labor done, as sinks the clay,
Light from its load the spirit flies ;
While heaven and earth combine to say,
How blest the righteous, when he dies !

This gifted lady, by birth, marriage, and association, was connected with the Unitarian church. Another of her hymns which, like several, has been extensively adopted into the psalmody of most Christian bodies, is this very well known one :

Come, said Jesu's sacred voice,
Come and make My paths your choice :
I will guide you to your home ;
Weary pilgrim, hither come !

Thou who, homeless, sole, forlorn,
Long hath borne the proud world's scorn,
Long hath roam'd the barren waste,
Weary pilgrim, hither haste !

Ye who, tost on beds of pain,
Seek for ease, but seek in vain ;
Ye, whose swollen and sleepless eyes
Watch to see the morning rise :

Ye, by fiercer anguish torn,
In remorse for guilt who mourn,
Here repose your heavy care :
A wounded spirit who can bear ?

Sinner, come ! for here is found
Balm that flows for ev'ry wound ;
Peace, that ever shall endure,
Rest eternal, sacred, sure.

PHILIP'S LOTTERY TICKET

BY LITTLE HOME BODY.

[The following little story contains good advice for the young idea of the day. It will please our juvenile readers.]

PHILIP and I had been playmates from infancy. Our mothers had been girls together, and our fathers had wooed and won their wives in the same town, and led them to the altar the same day. Both couples started for the far West—which was then anywhere west of the Hudson River, for my story begins when we were children, and I am a man now fifty years old.

Our parents moved into a town partly cleared up. My father designed to be a farmer, while Philip's father was a mechanic. I had five sisters, all younger than myself, and Philip had three brothers and one sister, the latter the youngest of the family. I do not know how it happened, but we were each named after our fathers, with the addition of our mothers' maiden name. My father bore the name of Solomon Fish, and my mother's name before her marriage being Miles, I was christened

Solomon Miles Fish, and my playmate, Philip Powers Goldwood.

We were the best of friends until we were twelve years old, when Mr. Goldwood received some advertisements through the post-office that told of a wonderful lottery that was to come off somewhere in Maryland. Philip and I were the only ones that saw our ships coming into port well laden by this enterprise, and we set about contriving means to purchase some tickets. My father had not paid for his farm, but he kept steadily at work, and to encourage me had given me a penny a bushel for husking corn in the fall. Philip had helped his father about the houses he built, and had also a little money laid up for—we shall see. The tickets were five dollars apiece, and if lucky would give the owner two hundred and fifty dollars for his five. Neither of us possessed as much money, and how to get it we studied a long time. It was thirty days before the drawing, but we could see no way to earn anything more. I had three dollars

and enough to pay the postage, and Philip had only two. One of us proposed putting the money together, but we finally hit upon another method for means. Philip said he would borrow of his younger brothers, but I had no brothers to borrow from.

"What a pity you have no brothers and so many sisters," said Philip, "they could earn something if they were boys, but girls never have any money; they are perfectly useless."

"My sisters have got money," I returned, quickly, for I was proud of my sisters, and could not bear to hear them spoken of as useless.

"Have they, how did they get it?"

"Their uncle in Boston sent them a gold dollar apiece for a keepsake," I returned.

"Won't they lend it to you?" asked Philip. "You can tell them to keep it a secret, and you will pay them double when you get your prize."

I had no trouble in obtaining the money from my sisters, for they rejoiced at learning anything that would bring us a little more of that article that would add comforts to our family, for my father had hard times some years to make his payments and keep his family well provided for. We posted our letters, I paying the postage, which was twenty-five cents in those days for carrying a letter so far, and Philip said he would pay his part when he got his prize.

"When you get your prize! What if we both should draw a blank?" I asked.

"O! we shall not. Now, Sol, what will you do with your money when you get it?" asked Philip.

"Pay back my sisters and then buy mother a black silk dress, and—" but Philip stopped me.

"'Come easy, go easy!' I've heard father say; but it will not be so with me. I'm going to be a merchant. I'll hang on to every cent I get and be rich. Let me see," continued he, "I shall want a partner—I'll take you. How do you think Goldwood & Fish would do for a sign?"

"O! ha! ha!" laughed he, "gold, wood, and fish were never made to go together. I say, we'll have it Philip Goldwood & Co. No, P. P. Goldwood & Co. That would look nice in gold letters. I never thought what a nice name I had until now, and how strange your's was: Solomon Miles Fish, and mine Philip Powers Goldwood. O! I'm bound to be somebody, I know!" While my companion went off into another train of adventures, I sat thinking and wondering if there was really a fate in a name.

In due time two letters appeared at the village post-office. My sisters stood by me and whispered, "Have you got the prize?" I took out two or three papers containing advertisements similar to the ones father had received, and a thick kind of paper on which was printed, "No. 3,463, blank," and a printed letter in which it was stated that the owner would probably be more fortunate next time. Well, I do not know which felt the worst, my sisters or myself. What would father and mother say when they came to know it, I asked myself. And those beautiful gold dollars gone, how could I ever pay them back?

My oldest sister, Alice, was the most inconsolable, but little Ella looked up and said:

"When we get big we won't care, will we?" and that proved to be the best thing to dry my tears and face the worst. Alice could not keep the secret, and the whole household soon knew it. Neither my father nor mother blamed me much, only my mother put her gentle hand on my head and said, "Why didn't you confide in mother?"

Perhaps if I had I should have been more lucky, came to my mind, and maybe what fate there was in a name might be overruled by my mother's advice, for in all the country around no one was thought more of than my mother, Mrs. Solomon Fish.

Half an hour after, Philip came in with his face glowing with smiles, and told us, in a breath, of his good luck. His number was 3,463, and had drawn two hundred and fifty dollars.

"Father is going to invest it for me," said Philip, "and when I am twenty-one I shall have a pile to begin life with. I would not be discouraged, Sol; better luck next time. Here is the quarter for my postage, father gave it to me to pay you," and Philip handed me the change.

"I wish Solomon had been as lucky as our Philip," said Mr. Goldwood to my father, not long after.

"I am not," returned my father; "I am glad his ticket drew a blank."

"Why so?" asked Mr. Goldwood. "Don't you think you need the money?"

"Yes, I need the money, but I need a son more."

"But you would not lose your son if he should be fortunate in drawing a prize," said Mr. Goldwood. "My Philip is not going to run away; this money is a stepping-stone to his future success in life."

"It is a stepping-stone to ruin," returned my father.

I do not think Mr. Goldwood quite liked father's reply, for he went away soon after. I thought my father a strange man; how two hundred and fifty dollars could ruin any one was beyond my comprehension. So I sighed, and told my trouble to little Ella, who said again, in her quiet way, "You won't care when you get big." Philip came to see me often, and urged me very hard to buy another lottery ticket, but I had no money; besides, I was still owing my sisters, and Alice could not forget her gold dollar. I tried every means to earn money to pay my debts, but ill-luck seemed to follow me. The next year was a poor one for farmers, it being one of those late, dry seasons, and the crops were a failure. Heretofore I had gathered nuts and sold them, but that year I could not find a handful. The few apples we raised were sold to pay taxes and interest, and the little that remained went to buy our winter's supply of clothes, school books, and other needful articles. The Goldwoods did not seem to feel the straits of the season. Philip's father built houses all summer, and the owners of them turned everything they could into money to pay the builder. We noticed that they papered their house, which was one of the luxuries that few in our town could afford. Philip had a new suit throughout, and it was said it was bought with the interest of the prize money. Winter school commenced, and I can not tell which of us was the more to blame, but Philip and I did not seem to be on as good terms as formerly. Perhaps I was a little envious of his good luck, and he somewhat proud of it.

"See here," said he one day before school commenced, "I would change my name if I were you. People do make fun of your father's foolish speeches; I suppose he thinks he is as wise as old Solomon, and as big a prophet as there ever was. Next year I would hire out somewhere and earn money and buy another ticket; you'll draw something sure next time."

"It is my duty to stay and help father," I replied.

"Couldn't you help him more if you drew a big prize? I tell you those sisters want lots of things; my only one does, and girls can't earn anything," and so he went on, I half-believing what he said, and the next moment angry for listening at all.

"I say," continued he, "when the teacher asks you your name, tell him it's Miles."

The idea struck me as being a good one, for "as wise as Solomon" did not sound as agree-

able to my ears as I could wish. So, when the teacher came around next day, I gave it to him in a firm voice, while looks of surprise and some tittering among the girls expressed their wonder or approval, I hardly knew which.

"M-i-l-e-s F-i-s-h," bawled out the rowdy of the school, as soon as we were let out at recess. "That is the longest string of fish for a short one I ever saw," continued he.

Somehow, Philip got angry with me and called me "Miles of Fish;" and in the afternoon recess there was printed in red chalk, on the side of the school-house, these words:

"Miles O' Fish, Prophet." I knew, and so did all the others, that no one had red chalk but the builder's son, and no one could print as well as he.

I walked in silence homeward, and just as I opened the gate, little Ella, who had shared my speechless walk and grief, put up her face to mine, and said that dear sentence of her's, "You won't care when you get big." Tears came, the first I had shed that day.

Time passed on, and I was sixteen. Philip had bought a number of lottery tickets with his extra change, but he drew blanks only. He still talked of being a merchant, and there was not a boy or girl but that expected to see the gold-lettered sign of P. P. Goldwood at some future time—the Co. had been long since left off.

Twenty-one found us both going out into the world to seek our fortunes. Our town had a railroad running through it, and a dépôt had increased the wealth of the place, so that my father was out of debt, but not wealthy. I had been through the preparatory department of college, and was ready to enter a collegiate course. I received but little aid from home, as there were five girls, younger, trying to fit themselves for school teachers. Philip studied book-keeping, as that was the only thing that would benefit him, he said, and left home to go into business, as he expressed it. At the end of two years I was obliged to stop for want of means, and finally decided to study law. I collected, ran on errands, and did all kinds of work to help myself, and at last was admitted to the bar. During this time the country was flooded with all sorts of gift enterprises, schemes, etc., and at last our town people received advertisements with the name of "P. P. Goldwood & Co." at the head of a grand lottery that was to be drawn at some future time. Almost every one in the county bought tickets, and some received cheap receipt books, trash they called plated ware, and worse than brass jew-

clry. The name of P. P. Goldwood disappeared, and still similar advertisements came from New York and other places denouncing other "gift enterprises" as "shams," but their one as genuine.

Meanwhile I was but a young lawyer, and those that knew me best knew I desired to engage on the side of right.

"Fish," said a gray-haired lawyer, whom I very much respected, "there is a poor fellow who is going to be tried for swindling, or something: no one seems willing to be his counsel; for from what I hear he is the guiltiest dog that ever stole a sheep. But, then, he has hinted that he has got the cash, and as you need some just now, go over and offer your services."

I do not know what made me go; it was not the money, surely, but I felt that I could not stay away, and I walked rapidly to the Court House. The prisoner sat with his head bowed and partly covered with his hands. He sat thus until the words, "The prisoner's counsel has arrived," were uttered, then he raised his head, and I saw the face of my old playmate. Instantly I was seized with an impulse to save him. I ceased to remember the red-lettered sign on the school-house and all the bitter things of the past. Save him, O! if I could. The trial was postponed, that I might talk with the prisoner. I can not tell you all the particulars, but they proved that he had been engaged in different lotteries ever since he left home; sometimes under his own name, but mostly under assumed ones; that he had received any amount of money, and had been at the head of the most daring and important frauds that had been known in those parts. The evidence closed at night, and I visited Philip just before the court opened next morning. I had received a touching letter from his mother, begging me to do all I could "for her son, her first-born." Philip slipped a small roll of what seemed to be a few dollars into my hand, perhaps a hundred, I thought, and lest the sum would influence me if large, or I should not do as well if small, I put it into my pocket without looking at it.

When I arose to make my plea I hardly knew what to say until my eyes rested upon his mother's letter. I took it up and I needed no studied rhetoric or eloquence as I read aloud the words from the heart-broken mother. I went over his innocent childhood and boyhood, and appealed to the jury and asked, "Can he be guilty of so great a crime?" I could not save him; he was sentenced for the long term, and I went back to my office.

"You did bravely," said my gray-haired friend, "and if you had had a piece of a shadow to turn the scales you would have won your case. But how much did you get?" he asked. I took the roll from my pocket and counted one thousand dollars!

"Well done," said he, "never did a handsomer day's work myself." I did not lack for cases after that, but somehow I could not use poor Philip's money. I tried to think of giving it to orphan asylums or to some other benevolent purposes. At last I hit upon a happy thought. I'll send it to my mother and sisters and tell them to buy a gold watch and chain apiece, and add a gold dollar for a charm.

The next year, at Christmas, I was invited home. After our greetings were over, they all disappeared, and then reappeared wearing their watches with the dollar charms. Sister Ella, always our pet, came up to me, and putting something on my finger ran away, saying, "The charm is on the inside, 'Miles O' Fish!'" Then I took it off, and engraven in the smallest letters were the words,

"We won't care when we get big!"

So, my readers, when you are tempted to buy a ticket that promises watches, pianos, or even city lots, just think of poor Philip; and if you should be as lucky, and draw a prize, remember it is like strong drink, you can not even taste without wanting more. So just button up your pockets and brave the world and work for what you can get honestly, for "You won't care when you get big."

FUNERALS IN PITTSBURG.

THEIR MORALE AND COST.

HERE is plain talk on a grave subject. We clip the following from a Pittsburgh, Pa., paper:

"The average funeral of to-day is a nuisance and a tyranny.

"The other day a funeral passed our office, and was certainly over two hours getting past. The police had to afford the courtesy of the streets. Street cars were stopped, iron wagons brought to a stand still, and the great, heavy, important travel of Smithfield Street had to cease to a certain extent for two whole hours of the most precious time of a Pittsburgh business day. It was not a public benefactor who was accompanied to his tomb by this long line of mourners;

nor was it a statesman, nor a leader. It was quite an ordinary man, who would never have been heard of for anything excellent he could show, and his friends were turning out a funeral procession as if running a competition for the livery stables. We never saw a jollier-looking crowd going to a picnic than this crowd going to the graveyard. In fact, we have about quit looking for mourners in funeral processions any more. The average funeral procession is composed of people who behave as if the only time they can get to enjoy a holiday of horse-flesh is when some friend or acquaintance dies; then the whole family, down to all the children, go out to mourn, and enjoy a day's ride at the expense of the dead man's estate. It seems as if the mourners make it a business to acquire acquaintances, in order to increase their chances for funeral rides. It is a good thing in a business way for the undertakers and liverymen; but it is fast becoming a public disgust. That man who would have the audacity to tell us that more than one out of every ten who ride in modern funeral processions cares a fig about the death of the individual whose demise procures the carriage ride—we should immediately set down as an unmitigated falsifier.

"Hence, we pronounce the average modern funeral a nuisance. The deference which delays business and gives clear streets for funerals is seldom deserved, but in most cases meanly taken advantage of for the purpose of a gay and fast ride, funeral rides being the only ones tolerated to go upon a run. If the public would grow indifferent to funeral processions and cease to extend them such strict and liberal courtesy, this nuisance might soon be in a great measure abated.

"Then, again, it is now a custom for a man's relatives to prove themselves by the size of the funeral they can get up for him. It has come to be that a man who is not followed to his grave by a long line of carriages is judged to have been nobody, and, of course, the relatives of the nobody suffer socially by their connection with him. Consequently, when a poor man dies, his family, to maintain social respectability, must get up a funeral for him, the bigger the better, and run themselves into debt and privations for months and months.

"Hence we pronounce the average modern funeral a tyranny.

"It is our opinion that the world will soon return to the ancient custom of cremation, or burning the dead. Cremation would take away both the nuisance and the tyranny attendant upon the modern funeral."

[All the pomp, *unnecessary* expense, and useless show bestowed on the dead, is so much *lost* to the *living*. Here in New York it not unfrequently happens, that "one's little all," is consumed on an ostentatious funeral. A poor man, who has a wife and children, sickens and dies. The wife, almost destitute, to be "in fashion," must incur the useless expense of hiring five, ten, or more carriages from a livery stable—kept for the purpose—at an extra cash cost of from \$25 to \$50, and upward, to help form a grand procession, and go *empty*, as they often do—or be filled with pleasure-seekers who care nothing for the departed. For one in ordinary circumstances, a funeral costs here from \$200 to \$500, and for one who has more means, from \$1,000 to \$2,000, and upward, *besides* the cost of ground, tombstone, etc., on which several thousands more are sometimes expended. There are graves in Greenwood which have cost more than \$50,000. Is not this a kind of idolatry? A coffin or casket may be made of solid rosewood, lined with the finest silk and silk velvet, mounted with solid silver, and this inclosed in a metallic (lead) case hermetically sealed, and the whole inclosed in a pine box, all to be buried from four to six feet in the ground. In the country, funerals are less showy and less costly. But a change for the better is coming over the spirits of the living in our cities, and we attribute it in large measure to the Father Mathew Temperance Societies of New York. These societies are composed chiefly of those who were once Irish, but are now naturalized American citizens, who, seeing the folly of Old Country customs, such, for example, as "wakes" and expensive funerals, have dropped them, and are adopting more sensible ways. A decent respect for the dead consists in a quiet and modest burial. It is the living who most need assistance, sympathy, and care. The money usually spent on useless or empty carriages to follow the dead may

much better be expended in supplying the real wants of the living.

Finally, would it not be as well for the rich to bestow a larger portion of their means on

some useful charity and a little less on expensive tombstones? Which would do the most good? On which investment, could one most heartily ask God's blessing?]

Department of Ethnology.

True Christianity will gain by every step which is made in the knowledge of man.—*Sperdin.*

NIUE AND THE NIUANS.

As the traveler proceeds eastward or westward from Australia he meets with numerous tribes distributed over the hundreds of islands of Polynesia, which command his attention by their most interesting physical and moral characteristics. The Papuan race has furnished the material for scientific examination for half a century and more, and is by no means thoroughly known. The tribes of the Philippines, the Andamans, the Marquesans, the natives of New Guinea, the Fijians, Tongans, and Samoans, have been, and are still, subjects of engaging ethnological study, and much is known of them by the American reading public through the published narratives of bold explorers and self-sacrificing missionaries.

We come now to consider the inhabitants of an island, concerning the history of whose discovery little is generally known, and yet that history is deeply interesting, and the people themselves may occupy our attention for a half-hour with profit. We refer to Niue, or "Savage Island," as it was called by Captain Cook, because the natives resisted his landing with fierce assault, and refused his proffer of peace and good-will. Niue lies between the Hervey and Tongan groups.

The Niuans owe their ferocity toward strangers to an ancient custom of putting to death all strangers who landed on their shores, a fate from which even their own people did not escape if they had been absent any length of time. They entertained the notion that their island was naturally free from disease, and that all ailments were brought by foreigners, and so the law was established that all foreigners should be killed as soon as taken. In Dr. Wood's "Natural History of Man" we are informed that when the missionary, Williams, visited the island he induced two native boys to leave their home and accompany him for the purpose of being instructed. They were,

at first, very miserable on board, and howled incessantly for the first few days, thinking that the white sailors were cannibals, and that they were to be eaten. Finding, however, that the sailors were eating only pork, they became reconciled to their lot. These lads were taken to Raiatea, and having been educated for their task, were sent home again. Unfortunately, soon after their arrival, an epidemic disease spread over the island, and the natives, naturally attributing it to the two travelers, killed them both.

The first white man who landed there since the time of Cook, met with a singular fate. A ship was lying off the island, and bartering with the natives. Just as the ship got under weigh, the master flung one of the sailors overboard among the savages, who took him on shore, and held a great debate as to the course to be pursued. Some were for keeping up the old custom and killing him, but others argued that the man had not landed of his own free will, and that he ought not to be liable to the usual penalty, even though salt water was in his eye—this being the mark of a shipwreck. After a discussion they agreed to put him into a canoe, give him a quantity of bananas and cocoa-nuts, and send him out to sea. The man contrived to slip on shore again without being seen, and after hiding in caves for some days, he succeeded in getting on board a whaler that was passing near the island.

The appearance of the natives as they were before the missionaries came to them was anything but prepossessing. Mr. Williams gives a graphic account of an old chief who was induced, after much trouble, to come on board. "His appearance was truly terrific. He was about sixty years of age, his person tall, his cheek-bones raised and prominent, and his countenance most forbidding. His whole body was smeared with charcoal, his hair and beard were long and gray, and the latter, plaited and

twisted together, hung from his mouth like so many rats' tails. He wore no clothing except a narrow strip of cloth round his loins, for the purpose of passing a spear through, or any other article he might wish to carry.

"On reaching the deck the old man was most frantic in his gesticulations, leaping about from place to place, and using the most vociferous exclamations at everything he saw. All attempts at conversation with him were entirely useless, as we could not persuade him to stand still for a single second. Our natives at-

concluded this exhibition by thrusting the whole of his long, gray beard, into his mouth and gnawing it with the most savage vengeance. During the whole of the performance he kept up a loud and hideous howl."

The islanders do not use the tattoo, though they are fond of decorating their bodies with paint. Those who come on board European vessels are delighted to be adorned with streaks and spots of red and green paint, especially the latter, which is a novelty to them, and for which they are willing to pay highly. The



THE WAR-DANCE

tempted to clothe him, by fastening round his person a piece of native cloth, but, tearing it off in a rage, he threw it upon deck, and stamping upon it exclaimed, 'Am I a woman that I should be encumbered with that stuff?'

"He then proceeded to give us a specimen of a war dance, which he commenced by poisoning and quivering his spear, running to and fro, leaping and vociferating, as though possessed by the spirit of wildness. Then he distorted his features most horribly by extending his mouth, gnashing his teeth, and forcing his eyes almost out of their sockets. At length he

hair is sometimes seen very short and sometimes very long, and this is the case with both sexes. They allow it to grow to a considerable length, and when it is a foot or eighteen inches long, they cut it off and plait it into thin bands, which are worn around the waist. The men prize these ornaments highly. The younger men do not wear their beards, but the elders suffer them to grow to a great length, plait them, and adorn them with pieces of oyster or clam shell. They know the art of coloring the hair a yellowish-red by the application of lime. As to dress, the men think it quite needless,

and wear nothing but the belt around the waist. Some, however, wear a very small apron, only ten or twelve inches square, and this is considered rather in the light of ornament than of dress. They are of moderate stature, rather under than over the middle height, thus forming a strong contrast to the gigantic Marquesans and Samoans. The natural color of the skin is a clear brown, and their limbs are round and well-shaped.

In weapons, they use the spear, the club, and the bow, all made well and neatly. They do not seem to invade other islands, and their warfare is therefore waged mostly among themselves. It seems rather strange that in an island only thirty miles in circumference war should exist, but in Niue the usual Polynesian custom exists, of dividing an island into several districts, among which is perpetual feud. They use one very curious weapon. On their island are a number of caves in the coral limestone. From the roof hang vast numbers of stalactites. The natives owe their fresh water almost entirely to these caves, and since the missionaries came to reside among them have learned to collect it by digging wells in the caves, into which the water flows, and so secure a constant supply. The floor of the caves is covered with stalagmitic masses, and from these the natives make oval balls about the size of cricket-balls, which they hurl from the hand with wonderful force and accuracy, not using the sling, as is the case with so many Polynesian tribes.

These caves are evidently due to the character of the island, which is partly coral and partly volcanic, the coral having been upheaved by volcanic force, leaving the surface fissured and broken by the sudden violence of the shock. The native legend respecting the origin of the island points to the same conclusion. They state that the island was raised to its present elevation by two of their ancestors, named Hananaki and Fao, who swam there from Tonga, and found the island only just above the waves. They stamped twice upon it, the first stamp elevating the island to its present height, and the second clothing it with trees and plants. They made wives for themselves out of the Ti tree, and so the island became peopled. We may easily see in this tradition a record of the two facts, that the island was elevated suddenly from the sea, and that the inhabitants are not aborigines, but emigrants from some other part of Polynesia, probably from Tonga. Though they believe themselves to be derived from this origin, they

have been subject to invasion from the restless and daring Tongans, whom they repulsed by an ingenious stratagem. The Tongans, possessed of far better weapons and better disciplined than the Niue islanders, were rapidly completing the conquest of the island, when the natives took advantage of the peculiar formation of their country. Across one of the deep and narrow clefts, so numerous on the island, the Niueans laid small branches, which they covered with banana and cocoa-nut leaves, and then strewed over all a slight covering of earth, which they arranged so as to look exactly like the surrounding soil. They then executed a sham retreat, and slipped around to the farther side of the chasm, so that the Tongans, flushed with victory, rushed on their retreating enemies with yells of triumph, and a great number of the foremost and best warriors were hurled down to the bottom of the cavern. Before the survivors could recover from their surprise, an attack was made upon them in overwhelming numbers, and of the whole Tongan expedition not a man escaped alive.

It was formerly thought that the Niueans were cannibals, but as far as can be ascertained the natives have never eaten human flesh. They do not even care for animal food of any kind; and though at the present time they have pigs in abundance, they use them almost entirely for the market to European ships, contenting themselves with bananas, yams, taro, and fish. Strangely enough, they have not imported into Niue the custom of kava-drinking, and they stand almost alone in their non-use of tobacco. Perhaps the avoidance of pig's flesh has something to do with their repugnance to liquid stimulants. At any rate, we have here an example which shames our *Christian* society!

Polygamy is practiced among the inhabitants of Niue, though it is fast dying out under the influence of the missionaries, who have further conferred a vast boon on the people by their discouragement of infanticide, which once prevailed to a terrible extent. The mere check which they have placed on this custom has already raised the number of the population by more than three hundred—a considerable increase when the small size of the island is taken into consideration. Even before the missionaries came, a tolerably comprehensive and just code of laws was in existence, so that the Niueans were, in reality, much less savage than many of their neighbors, and the missionaries had a better ground to work on than in other islands of more promising aspect. Their

standard of morality was much higher than is usually the case among savages, infidelity among women being severely punished. So great was their horror of this crime that illegitimate children were always thrown into the sea, until the missionaries taught the people that, though the parents might be liable to punishment, the innocent children ought not to suffer.

Their punishment consisted generally in deprivation of food. For example, for some offenses the criminal was tied to a post and allowed no food except bitter and acrid fruits, while for more serious offenses he was lashed hand and foot to a bamboo for a considerable length of time, only sufficient food being given to save him from actually dying of starvation. For these punishments the missionaries have induced the natives to substitute forced labor in well-sinking, road-making, and other useful works. The Niuan are good canoe-makers, constructing their vessels very neatly and ornamenting them with devices in shells and mother-of-pearl. They manage these canoes well, and are excellent swimmers. There are, however, some families living in the interior of the island who, although they can be barely four miles from the sea, have never visited it, and are greatly despised by their neighbors because they can neither swim nor sail a canoe.

The native architecture has been much improved by the Samoan teachers, who instructed the Niuan in their way of building houses, upon which the Niuan have engrafted their own mode of adornment, so that, altogether, the effect of a modeen Niuan house is quaint and, at the same time, artistic. The natives seem to be wonderfully quick at learning, and have even acquired the use of the pen, so that a Niuan can now be scarcely better pleased than by the gift of a pencil and a supply of white paper.

The wonderful advance that these people have made in a comparatively few years, is shown not only in the fact that they have discarded their old habit of murdering foreigners, but that they display a great eagerness to be taken as sailors on board European ships. They contrive often to smuggle themselves on board without the knowledge of the captain and crew. Their method of disposing of the dead is twofold. When one mode is followed, the body is laid on a bier and left in the woods until all the flesh has decayed, and then the bones are removed to the family burying-place, which is usually a cave in the limestone rock. When the other method is employed, the body is laid in a canoe and sent adrift in the sea to go wherever the wind and tides will carry it.

CHINA, ITS PEOPLE AND PRODUCTIONS.

THE Empire of China, which, until within a comparatively few years, was shut out, or shut in, from other nations, not more by the massive Chinese wall than by a consolidated national aversion to the rest of the world, is now beginning to be partially understood. In a recent interview which we had with a celebrated Japanese scholar, who had been educated in England and America, he remarked that some nine hundred years ago the Chinese literature was adopted by Japan, and it in itself tended to make Japan jealous of other nations and inclined to keep herself aloof from them. The friendly mission of Com. Perry, in 1853, from the United States to Japan, gave the people of that nation a new idea of outside civilization. The Portuguese having made war upon them several centuries previous, they were led, perhaps justly, to look upon foreigners as barbarians, as war-dogs, bent on conquest, seeking to burn, sink, and destroy that they may possess and occupy the countries so conquered. Com. Perry carried with him,

to be sure, guns and powder; but he also carried with him a Christian spirit, and taught the Japanese to entertain a better opinion of the nations of the world, and since that time there have been made in China, and also in Japan, great inroads, so far as the obtaining of knowledge and the opening of communication are concerned.

The *Quarterly Review* gives an exhaustive article compiled mainly from references to various articles written by eminent travelers, and from it we condense some facts which may interest our readers.

China is supposed to be inhabited by more than two hundred millions of people, who are united under one government, with a history at least two thousand years old; but the remoteness of the country and the obstinate exclusiveness of its government have awakened great curiosity. Thanks, however, to the recent treaties and to the residence in that country by our late eminent fellow-citizen, Mr. Burlingame, the old state of things has begun

to pass away, and recent writers have brought the distant China much nearer to us.

Large tracts of arable land are lying waste in several of the provinces of China. The ravages of late rebellions have depopulated certain sections; a recent outbreak having, it is estimated, cost the country the incredible number of fifty millions of people, and in some populous provinces only three in a hundred of the inhabitants escaped death at the hands of the rebels. The Chinese appear to have more Destructiveness than Combativeness,—more cruelty than energy.

In the northern confines of the empire, we read of vast forests which wait the ax and the plow to be made to yield food in abundance, for the native soil seems well adapted to agricultural purposes.

That China is over-populated in some parts is proved by the stream of emigration that annually pours from the southern sea-board provinces across the Pacific Ocean to California. But China is without good roads or means of communication within her own provinces, except along her rivers, and it is, therefore, easier for a Chinaman to find a place to work in by crossing the Pacific to California, than to find his way to unoccupied regions in his own country; besides, without roads or a market for these interior portions of China, the inhabitants can neither sell their produce nor readily obtain articles of necessity from the distant markets. A few good roads in China would enable the people in the more populous districts to migrate within their own borders and bring the produce of their country into valuable use.

The minerals in the Chinese Empire are understood to be rich and abundant. Mining is not altogether unknown, though it is discouraged by the jealous policy of the government. The quartz rock is reported to be rich in gold, and nuggets are met with in certain districts. No estimate can be formed of the supply of gold which is buried in the hills, though everything leads to the belief that it is enormous. We hear of salt wells, quicksilver, copper, lead, and tin mines, and of petroleum pits. China is also full of coal, which is at once the most valuable, widely distributed, and accessible of all descriptions of her buried wealth. According to one writer, the Chinese coal fields cover an area of upward of 400,000 square miles, while England has but 12,000 square miles of coal. In a single district of China easily approached by water and easily mined, there is an area of anthracite and bitu-

minous coal equal to the entire coal fields of Pennsylvania. China alone has coal enough to supply the whole world, at its present rate of consumption, for thousands of years. The coal beds vary from twelve to thirty feet in thickness; the system of coal-bearing strata in the province of Shansi is about five hundred feet in thickness, and contains, besides, an inexhaustible supply of iron ore.

The Chinese work their iron ore beds and make iron of an excellent quality, but their method of working is so rude that it is easier for them to obtain both iron and coal from England by sea than to supply themselves, and one of the chief reasons of this is the very deficient means of communication in that country. We learn that in the very regions where coal most abounds, so desperate is the need for fuel, that the climate has been ruined by the cutting down of all trees and brushwood to supply fuel for domestic purposes.

China has rivers and canals, and along these her commerce is carried on, clumsily, to be sure, but cheaply; but away from the rivers and canals the utmost restriction of prosperity prevails. Cotton is produced in China in abundance, and is largely manufactured into coarse fabrics, yet the United States and Great Britain can compete with the Chinese in these fabrics in their own markets.

The roads are in a state of nature; no one looks after them. The weather rules them, and in the level districts there are roads with lines of deep ruts, and which, of course, in time, would become utterly impassable; but the rain obviates this evil by washing them all into a common mire, and when the rain ceases the sun hardens the mud, and this mode of repair is perpetually repeated, and is all the renewal the roads receive. As many as a dozen animals—horses, asses, and bullocks—are frequently required to drag one small-sized cart over these roads. Mr. Markham gives the following account of the conveyances in Shantung:

"The means of traffic along the road are carts, wheel-barrows, camels, mules, and donkeys. The carts carry six to twenty piculs (800 to 2,600 lbs.), and are drawn, the larger ones by five mules, and the smaller ones by two. Wheel-barrows carry from two to ten piculs (266 to 1,333 lbs.), and are propelled by one man pushing, another in front in a sort of shafts, and a donkey, ox, or mule, in front of all, attached by traces of rope. For the man behind, who has to push, guide, and support the whole weight on his shoulders, the work is terrific, and seemed to me to be the very acme

of human labor. These men seldom reach the age of forty years, I was told."

The severity of the work was found by Mr. Williamson to be even greater in a neighboring province.

"The barrowmen in Shantung," he writes, "are bad enough, but these (of Western Honan) are lower than they. The loads were dreadful, and the work beyond anything I ever saw; the pushing and tugging and swaying of the men's bodies as the barrow rolled over the uneven, often stony road, was terrific, and their ravenous, eager eating at the inns on the roadsides excited the most painful feelings. Human labor is cheaper here than donkey hire; this has gone on for years, and will go on till railways cheapen the carriage of goods, and thus break the yoke from off such slaves."

With such roads and such means of conveyance, of course the transportation of iron and coal would form a great item in their cost to the consumer. In the province of Shansi, coal which costs twenty-five cents a ton at the mines would cost six dollars at a distance of thirty miles, or eleven dollars at a distance of sixty miles; of course only those who live in close vicinity to coal mines can derive any benefit from them, and a coal mine which is not worked close by a navigable river is of little value to the people. The roads being too poor to permit communication between different districts, and there being no means of advertising, if the crop fails in a district there may be a superabundance of food fifty miles away, but the people starve by thousands, and those having an abundance are not aware that a good market is so near to them. Moreover, as no one expects to sell the surplus, they endeavor to raise only so much as they require, and if that be cut off by drought, by insect, or by inundation, their resources are exhausted. But poor as are the people, and meagre and thriftless as are the ways of acquiring property in China, there is a herd of hungry officeholders, who prey upon the prosperity of the people and consume nearly all the surplus profits of labor.

There are two political parties in China—one, known as the anti-foreign or war party, is pledged to the expulsion of foreigners from the soil of China at all risks; the other is the liberal or moderate party, and its policy is to hold the balance between the claims of foreigners on the one hand, and the headstrong resistance of the extreme section of its own order on the other hand. The latter party is enlightened enough to know that the true pol-

icy of China is to conciliate by a reasonable surrender of her prejudices to that foreign element which she can no longer hope to repel by force. At heart, doubtless, the whole ruling body in China is opposed to the presence of foreigners in the country. The educated class, from which the Chinese officials are taken, is anti-foreign. The sale of places of rank fills the public offices with corrupt and incompetent men, while the system of exacting heavy fees of office, in the shape of bribes, from every officer for appointment or promotion to those above him, not only debases the morals, but crushes the prosperity of the people. Injustice is sold notoriously to the highest bidder, hence universal discontent, tax riots, and insurrections.

Much may be done by the introduction of machinery, railroads, telegraphs, and steam navigation. But we believe the time is not very near when full intercommunication between the people of China and those of Europe and America may be expected.

China groans under oppression from the head of their government through the long line of mandarins and officials. Their commerce is limited, their means of agriculture, of mining, and of manufacture are at the lowest ebb, and with a religious bigotry and intolerance which repel the introduction of a better civilization will tend for a long time to maintain in China, for the most part, that exclusiveness which hitherto has been its hindrance and its curse. Japan has been depressed and rendered jealous of other nations by the Chinese literature, but now seems heartily in earnest to obtain the best civilization the world can give it.

The Japanese Embassy now in this country is sent here by its government to see what it can learn of our civilization, our arts, manufacturing, commerce, literature, and government. As the Secretary of the Embassy said to us, We come to learn all your best things, and to transfer them to our country, your machinery for agriculture and for manufacturing, your best modes of education, and all that belongs to your best features of civilization; for Japan wants to adopt these that she may rise to a higher and nobler civilization. When Japan shall have thus come in contact with other nations of the world, and shall have adopted their customs, China may, through that example, be led with less fear of encroachment by "barbarians," to adopt a civilization which shall make her more free, learned, intelligent, successful, and happy. Possessed of

a fine climate and a rich soil, with a population almost fabulous, yet with room enough for all, what may she not become when raised from barbarism and taught to use her wonderful power beneficently and intelligently?

COLORADO.—This young territory will soon be a State, as it is getting on apace. The assessed valuation of property in the territory is \$24,000,000. It has a population of 75,000, no public debt, levies no territorial tax for the year

1872, and has a balance of over \$50,000 in the treasury. The following table is taken from the report of the auditor for 1872: Horses, 15,000; sheep, 1,000,000; mules, 3,000; cattle, 150,000; swine, 8,000; goats, 5,000. [Buffalo, antelope, deer, bear, and "such like," though of considerable value, are not counted, because not subject to control. Colorado gave us the first narrow-gauge railway, and, by means of its extension all through her great, grand, rich mountains, her mineral wealth will be brought out.]

Physiognomy, or Signs of Character.

*Of the soul, the body form doth take,
For soul is form, and doth the body make.—Spenser.*

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONTINUED FROM OUR OCTOBER NUMBER.]

ESSAY VIII.

OF EXPRESSION IN REFERENCE TO THE BODY—THE EMOTIONS MODIFIED BY CONTROLLING EXPRESSION.

IN the preceding essays it has been shown that the powerful passions influence the same class of nerves and muscles which are affected in highly excited or anxious breathing, and it was inferred that the apparatus of respiration is the instrument by which the emotions are manifested. In fear or in grief the movements of the nostrils, the uncontrollable tremor of the lips, the convulsions of the neck and chest, and the audible sobbing, prove that the influence of the mind extends over the organs of respiration, so that the difference is slight between the action of the frame in a paroxysm of the passions and in the agony of a drowning man.

Having traced the connection between the excitement of the chest or trunk of the body and expression in the face, we may for a moment turn our attention to the consent between the breathing or expression of the body generally, and the position of the limbs. Let us take the instances by which we before illustrated the universal consent of the animal frame. When the tiger or wolf is struck by the keeper and suddenly roused to ferocity and activity, the character is seen not

only in the glare of the eyes, the retraction of the lips, and the harsh sound of the breath as it is forcibly drawn through the confined throat, but every muscle is in tension and the limbs in an attitude of strained exertion, prepared to spring. In this condition of high animal excitement observe the manner in which the chest is kept distended and raised; the inspiration is quick, the expiration slow; and as the keeper strikes the jaw there is at the same instant a start into exertion, and the breath rapidly drawn in. The cause of this expansion of the chest is readily understood when we recollect that the muscles by which the limbs are exerted have two extremities: one fixed, which is called the origin; the other moveable, which is called the insertion. The muscles of the arms in man, and of the forelegs in brutes, have their origins on the chest. To give power to the further extremities or insertions of these muscles into the limbs, the chest must be fixed; and to give them their fullest power, it must be raised and expanded as well as fixed. Hence that most terrible silence in human conflict, when the outcry of terror or pain is stifled in exertion; for during the struggle with the arms the chest must be expanded or in the act of rising,

and, therefore, the voice, which consists in the expulsion of the breath by the falling or compression of the chest, is suppressed, and the muscles which perform the office of raising and distending the chest, act in aid of the muscles of the arms. The moment of alarm is also that of flight or defense; the sudden and startled exertion of the hands and arms is attended with a quick inspiration and spasm of the mouth and throat, and the first sound of fear is in drawing, not in expelling, the breath, for at that instant to depress and contract the chest would be to relax the muscles of the arms and enfeeble their exertion. Or, to put the example in another form, suppose two men wrestling in the dark, would not their voices convey to us the violence of their efforts? The short exclamation choked in the act of exertion, the feeble and stifled sounds of their breathing, would let us know that they turned, and twisted, and were in mortal strife. To an apt observer, two dogs fighting might illustrate the subject. Such combinations of the muscular actions are not left to the direction of our will, but are provided for in the original constitution of the animal body—they are instinctive motions. Yet the principles of criticism in these matters have been laid down with surprising confidence by persons who had no knowledge of anatomy, and whose curiosity had never been raised to inquire into the phenomena of their own emotions, or of those they must have witnessed in others. I shall transcribe here a passage from an elegant and ingenious critic, on which I shall freely make some remarks:

"In like manner it is not with the agonies of a man writhing in the pangs of death that we sympathize, on beholding the celebrated group of Laocoon and his sons, for such sympathies can only be painful and disgusting; but it is with the energy and fortitude of mind which those agonies call into action and display. For though every feature and every muscle is convulsed and every nerve contracted, yet the breast is expanded and the throat compressed to show that he suffers in silence. I therefore still maintain, in spite of the blind and indiscriminate admiration which pedantry always shows for everything which bears the stamp of high authority, that Virgil has debased the char-

acter and robbed it of all its sublimity and grandeur of expression by making Laocoon *roar like a bull*; and I think that I may safely affirm, that if any writer of tragedy were to make any one personage of his drama to roar out in the same manner on being mortally wounded, the whole audience would burst into laughter—how pathetic soever the incidents might be that accompanied it. Homer has been so sensible of this that of the vast number and variety of deaths which he has described, he has never made a single Greek cry out on receiving a mortal wound."*

The criticism here is just, so far as the artist is praised and the poet blamed; but the critic has mistaken the ground of the praise and of the blame. It appears strange that any one should philosophize on such points and yet be ignorant of the most common things in the structure of his own frame, and of the facts most essential to just criticism in works of art. What ideas can be conveyed, for example, by "the convulsions of a feature" and the "contraction of a nerve?"

The writer has had the impression which all who look on the statue must have, that Laocoon suffers in silence, that there is no outcry. But the aim of the artist is mistaken. He did not mean to express "energy and fortitude of mind," or by "expanding the breast and compressing the throat to show that he suffers in silence." His design was to represent corporeal exertion, the attitude and struggles of the body and of the arms. The throat is inflated, the chest straining, to give power to the muscles of the arms, while the slightly parted lips show that no breath escapes; or, at most, a low and hollow groan.† He could not roar like a bull—he had not the power to push his breath out in the very moment of the great exertion of his arms to untwist the serpent which is coiled around him. It is a mistake to suppose that

* Mr. Payne Knight on Taste, p. 383.

† "Ille simul manibus tendit divellere nodos,
Perfusus sanie vittas atroque veneno:
Clamores simul horrendos ad sidera tollit:
Qualis mugitus, fugit quum saucius aram
Taurus, et incertam excussit cervicis securim."—

Æneid, Lib. II. l. 280.

"Virgilio ci rappresente Laocoonte in smanie e in muggite, come un toro ferito a morte; ma Agesandro seppe esprimere tutto il dolore, senza cedere la bellezza."—*Asaro*, p. 53. This is just the criticism of Mr Payne Knight.

the suppressed voice and the consent of the features with the exertion of the frame, proceed from an effort of the mind to sustain his pain in dignified silence, for this condition of the arms, chest, and face are necessary parts of one action.

The instant that the chest is depressed to vociferate or bellow, the muscles arising from the ribs and inserted into the arm bones must be relaxed, and the exertion of the arms become feeble. Again, in speaking or exclaiming a consent runs through all the respiratory muscles; those of the mouth and throat combine with those which move the chest. Had the sculptor represented Laocoon as if the sound flowed from his open mouth, there would have been a strange inconsistency with the elevated condition of his breast. Neither is it correct to suppose it possible that a man struck down with a mortal wound and rolling in the dust, like Homer's ill-fated heroes, can roar out like a bull. A mortal wound has an immediate influence on these vital parts and respiratory organs, and the attempt to cry aloud would end in a feeble wail or groan. There is no danger that the tragedian who follows nature should offend the taste of an audience by actual outcry. But these critics think it necessary to refine and go beyond nature, whereas the rule is to learn her ways and to be cautious of adding the slightest trait of expression, or what we conceive to be such, to the simple, and because simple the grand character of natural action, instead of making the appeal more strongly to the senses it is sure to weaken it.

In Bernini's statue of David with his sling, there is an attempt at expression which offends good taste, because it is not true to nature. The artist has meant by the biting of the lip to convey the idea of resolution and energy. But that is an action intended to restrain expression, to suppress an angry emotion which is rising in the breast; and if it be permitted, even in caricature, it must be as a sign of some trifling inconvenience, never of heroism. It is not suitable to the vigorous tone which should pervade the whole frame. That vigor can not be otherwise represented than by the excitement of the breast, lips, and nostrils, while the posture and the eyes give it a direction and meaning.

This is all destroyed by an expression so weak and inconsistent as biting the lip; it is vulgar, not because it is common, but because it is a trick, and not true to nature.

The "Dying Gladiator" * is one of those masterpieces of antiquity which exhibits a knowledge of anatomy and of man's nature. He is not resting, he is not falling, but in the position of one wounded in the chest and seeking relief in that anxious and oppressed breathing which attends a mortal wound with loss of blood. He seeks support to his arms, not to rest them or to sustain the body, but to fix them that their action may be transferred to the chest, and thus assist the laboring respiration. The nature of his sufferings leads to this attitude. In a man expiring from loss of blood, as the vital stream flows, the heart and lungs have the same painful feeling of want, which is produced by obstruction to the breathing. As the blood is draining from him, he pants and looks wild, and the chest heaves convulsively. And so the ancient artist has placed this statue in the posture of one who suffers the extremity of difficult respiration. The fixed condition of the shoulders as he sustains his sinking body, shows that the powerful muscles common to the ribs and arms have their action concentrated to the struggling chest. In the same way does a man afflicted with asthma rest his hands or his elbows upon a table, stooping forward, that the shoulders may become fixed points; the muscles of the arm and shoulder then act as muscles of respiration, and aid in the motion of the chest during the heaving and anxiety which belong to the disease.

When a man is mortally wounded, and still more if he be bleeding to death as the gladiator, he presents the appearance of suffocation; for the want is felt in the breast, and relief is sought in the heaving of the chest. If he have at that moment the sympathy and aid of a friend, he will cling to him, half-raising himself and twisting his chest with the utmost exertion, and while every muscle of the trunk stands out abrupt and prominent, those of the neck and throat, and nostrils and mouth, will partake the excitement. In this condition he will remain

* The Dying Gladiator is reproduced in a striking engraving in *NEW PHYSIOGNOMY*, by S. R. Wells.

fixed, and then fall exhausted with the exertion; it is in the moment of the chest sinking that the voice of suffering may be heard. If he have fallen on the turf, it is not from pain, but from that indescribable agony of want and instinctive struggling that the grass around the lifeless body is lodged and torn.

So, too, with the actor. In order to convey to the spectator the idea of human nature agitated by passion or suffering, he must study how the parts of the frame are united and co-operate in expression. Of the success of such an effort we had lately an example on our own stage. It was in witnessing the struggles of a man who had received the mortal thrust, and the representation was horribly correct. The actor having rubbed the paint from his face, presented a hollow cheek, with the countenance haggard and pale, but it was the heaving of the shoulders attending his deep and painful inspiration—his difficult utterance—the gurgling of his voice, as if the blood impeded the breath, which made altogether a most powerfully drawn representation of violent death. Even those who knew nothing of the cause of their being moved felt that it was correct.

But let us take a less appalling instance of the consent of the frame with the functions of the heart and lungs. It is this connection between the muscles of the chest and arms which makes a little man oppressed by obesity speak with abrupt gesticulation. His emphatic words are forced out in barking tones, accompanied by jerks and twists of the arms, the reverse of grace; while a tall and ungainly person exhibits an awkwardness of an opposite kind, in a disjointed swing of his arms during the efforts of his elocution.

Are we not now authorized to say, that expression is to passion what language is to thought; that as without words to represent ideas the reasoning faculties of man could not be fully exercised, so there could be no violence or excess of passion merely in the mind and independent of the action of the body? As our thoughts are embodied and the reasoning powers developed by the instrument of speech, the passions or emotions have also a corresponding organ to give them a determined character and force. The bodily frame, though secondary and inferior,

comes in aid of the mind, and the faculties owe their development as much to the operation of the instruments of expression as to the impressions of the outward senses.

It is also curious that expression appears to precede the intellectual operations. The smile that dimples an infant's cheek, which in after years corresponds with pleasurable and complex emotions, can not have its origin from such ideas. This expression is not first seen when the infant is awake, but oftener while asleep; and this first beam of pleasure to a mother's eye is met with the cold observation of the wise old woman, that it is caused by some internal convulsion. They conclude that the child's intellects are not yet matured to correspond with the expression, and attribute the effect to some internal irritation. The expression is, in fact, the spontaneous operation and classification of the muscles which await the development of the faculties to accompany them closely when they do arise, and in some measure to control them during life. It may be too much to affirm that without the co-operation of these organs of the frame the mind would remain a blank; but surely the mind must owe something to its connection with an operation of the features which precedes its own conscious activity, and which is unerring in its exercise from the very commencement.

The expression of pain in an infant is extraordinary in force and caricature; the expression of laughter is pure in the highest possible degree, as indicating unalloyed pleasure, and it will relax by sympathy even the stubborn features of a stranger. Here the rudiments of expression ought to be studied, for in after life they cease to have the pure and simple source from which they spring in infancy; the feelings are composed and restrained, the mind is in a state of more compound feeling, and the genuine characteristics of passion are to be seen only in unpremeditated bursts of great vehemence.

How much influence the instrument of expression has in first rousing the mind into that state of activity which we call passion or emotion, we may learn from the power of the body to control these affections. "I have often observed," says Burke, "that on mimicking the looks and gestures of angry, or placid, or frightened, or daring men, I

have involuntarily found my mind turned to that passion whose appearance I endeavored to imitate."

Whether it be possible to mold the body, and thus to steal into another's thoughts, I know not; but it is of more consequence to recollect that we may in this way ascertain our own. As the actions and expressions of the body betray the emotions of the heart, we may be startled and forewarned, as it were, by the reflection of ourselves, and at the same time learn to control our passions by restraining their expression.*

As we hold our breath and throw ourselves into an opposite action to restrain the ludicrous idea which would cause us to break out in rude laughter, so may we moderate other rising impulses by checking the expression of them; and by composing the body we put a rein upon our very thoughts. The powers of language are so great and minister in so superior a manner to reason and the higher faculties of the mind, that the language of expression, which attends the development of these powers, is in a manner superseded; good taste and good manners retain it in habitual subordination. We esteem and honor that man most who subdues the passions which directly refer to himself, and cultivates those which have their source in benevolence—who resists his own gratification and enters warmly by sympathy into what others feel—who despises direct pleasures, and cultivates those enjoyments in which he participates with others. "Whatever is morally just, is beautiful in art;" the expression of pain proceeding from the mere suffering of the body is repulsive in representation, while the heroic pangs which the artist may raise to the highest degree of expression, in compassion or sympathy with

another's sufferings, can not be too powerfully portrayed, if they be consistent with nature and truth.

In studying expression the artist should attempt all, even that which is disagreeable, so that in higher composition he may avoid deformity and every debasing expression, and this not by chance, but by knowing them and avoiding them; by this means—and it was followed by the ancients—his power of representation will be improved, and what is dignified and beautiful in form and expression more certainly attained.

ESSAY IX.

OF THE STUDY OF ANATOMY AS NECESSARY TO DESIGN—OF THE IDEAL, IN THE REPRESENTATION OF THE BODY—OF THE GENIUS AND STUDIES OF MICHAEL ANGELO BUONAROTTI.

WERE I to attempt a definition of the ideal in the representation of the body or of the head and face, I should adopt, as the most harmless to the sculptor or painter, that which has been given by Cicognara. "The ideal in art," says he, "is nothing more than the imitation of an object as it ought to be in perfect nature, divested of the errors or distortions which secondary causes produce." He takes for granted that man, like everything else, has degenerated from the original design of nature, and "that we ought to endeavor to present his form as when he rose a newly-created being, before misery and famine, cold or excess of heat, had influence upon his frame. To accomplish this the artist has to contemplate those acknowledged beauties in the Venus, in the youthful Apollo, in the vigorous Athletæ, and in the Hercules. From such sources he must select the perfect forms, which are now to be found no longer in nature, and re-compose them into a *beautiful whole*."

This is at least intelligible, and to a certain degree practicable. It divests the subject of that mystery which those throw over it who would persuade the artist that to represent perfection of form he must avoid what is human and retain what is divine.

But when this is attained and the drawing of the figure is unobjectionable, a higher object still is to be found in a deeper medita-

* In our unstudied action and gesture the organs of the brain which are highly exercised indicate their true nature. The mother toying with her infant moves her head backward and forward, responsive to the impulse of Philoprogenitiveness. The angry, contentious man moves his head abruptly and menacingly from side to side, responsive to the inspiration of Combativeness. The man who loves display and courts admiration, when under the influence of these feelings, wags the head diagonally in an undulating, graceful fashion, etc. In the voice are heard and readily distinguished the accents of emotion, of rage, of passion. Such correspondences as these have long been known to and elucidated by phrenologists.

tion on human nature. Sentiment and expression may be impressed on the figure, as on the face; but they must be made appropriate to their situation. Some of the most beautiful remains of Grecian art, when deposited in churches, appear out of place; while in the same situation the statues of Michael Angelo seem perfectly congenial.



FIG. 1.—THE HUNTSMAN REPOSING.

The noble forms and grave attitudes of his statues, in the somber light of the aisles, lead memory back to all that is great in times gone by. Those magnificent designs have the effect of a passage in the historian or the poet, when the reader closes the book to indulge in the associations of ideas which have been awakened. But were they placed in a gallery or saloon they might with more

propriety be subjected to the flippant criticisms which they have met with.

Individuals as well as nations have different manners of representing the same objects—the human figure, for example. The Egyptians, the Greeks, the people of Hindostan, or of Europe, will raise a monument with more marked peculiarities than are seen even in the designs of Michael Angelo, Correggio, and Raphael; care, therefore, should be taken to give full scope to different dispositions, capacities, or tastes. I can not help saying that the method of study in the academies tends to cramp the efforts of genius. In the Academy of Bologna I found the students copying from the plaster casts, as our youths do at home; and if some means be not afforded to encourage individual genius, tameness and mediocrity must be the result. I think the remedy is to be found in the study of anatomy.

There has been much unnecessary ingenuity exercised on the question, whether the ancients studied anatomy. Undoubtedly they did not study it in our fashion, yet that they possessed all the knowledge of it which art requires, can not be denied. The finer specimens of ancient statuary evince a more perfect acquaintance with anatomy, as far as it is shown in the proportions, general forms, and action of the body, than the productions of those modern sculptors and painters who have pursued this art with the greatest zeal and success—even than Michael Angelo himself. The only question, therefore, is how they acquired this knowledge.

Although in Greece the dead were burned, and no artists dissected the human body, yet they certainly had the means of learning the nature of a bone, muscle, and tendon. No more was necessary; the rest was before them. Fine as their *athletæ* were in youth they were subject to the decay of age. Now, in comparing the frame of a man advanced in years, especially if in earlier life he had been remarkable for "thews and sinews," with the young and active, everything essential to the painter and the sculptor may be observed. If the Greeks had before them the most ad-

mired forms of youth and manhood, they had also the "time-honored wrestler," who in old age exhibited, almost as in the dead anatomy, every muscle, origin and insertion, every tendon, and every vein. I know how far this manner of demonstrating the anatomy may be carried. Having, in my lectures on surgery, taken the living man, the academy model, to illustrate the practice in fractures and dislocations, I was accustomed to introduce a powerful muscular fellow to my class, with this appeal: "In the exercise of your profession you have to judge of the displacement of the limbs, and the joints disfigured by dislocation, fractures, or tumor; but not one of you, perhaps, has ever looked on the natural body itself." In giving these lessons I became aware how much of the structure of the muscles and articulations might be demonstrated without actual dissection.

In the heat of the southern countries of Europe, the workmen, the Galeotti, or men condemned to the public works, the young people and children, are all accustomed to a state of nudity; the naked form becomes, therefore, familiar to the eye.

In the same day I made careful examinations of the anatomical studies of Michael Angelo, in the collection of the Grand Duke of Florence, and I compared them with his noble works in the tombs of the Medici. I observed that he had avoided the error of artists of less genius, who, in showing their learning, deviate from living nature. I recognized the utmost accuracy of anatomy in the great artist's studies; in his pen-and-ink sketches of the knee, for example, every point of bone, muscle, tendon, and ligament was marked, and perhaps a little exaggerated. But on surveying the limbs of those fine statues, this peculiarity was not visible; there were none of the details of the anatomy, but only the effects of muscular action, as seen in life, not the muscles. As, perhaps, this is the most important lesson which can be given to the artist, I shall venture to transcribe the notes I made at the time.

"The statue of Lorenzo di Medici, Duca

d'Urbino, by Michael Angelo, is in the Cappella di Principi, of the church of St. Lorenzo. Under the statue are two figures, one of Twilight, the other of Daybreak. I observed in the male figure, which is of very grand proportions, the clavicle or collar bone, the head of the humerus, the deltoid and pectoral muscles developed beyond nature, yet singularly true in the anatomy. Such a



FIG. 2.—A WOODLAND NYMPH.

shoulder was never seen in man, yet so finely is it imagined that no one part is unduly exaggerated, but all is magnified with so perfect a knowledge that it is just as a whole, the bone and the muscle corresponding in their proportions. In the same chapel are the statues of Giuliano di Medici, Duke of Nemours, and brother of Leo X., with the recumbent figures of Day and Night. It is in these finely conceived figures that we have

the proof of Michael Angelo's genius. They may not have the perfect purity and truth that we see in the antique, but there is a magnificence which belongs to him alone. Here we see the effect of muscular action without affected display of anatomical knowledge. The back is marvelously fine. The position of the scapula, for example, makes its lower angle throw up the edge of the latissimus dorsi, for the scapula is forced back upon the spine in consequence of the position of the arm. Michael Angelo must have carefully studied the anatomy in reference to the changes produced in the living body by the action of its members; the shifting of the scapula, with the consequent rising of the mass of muscles, some in action, some merely pushed into masses, are very finely shown."*

Having just come from observing his sketches of the anatomy of the knee joint, I was curious in my observation of the manner in which he made his knowledge available in the joints of these fine statues, and they gave rise to the following remarks:

"If an artist, with a knowledge of the structure, should look upon the knee in a bent position, he will recognize the different bones and ligaments. But if he look upon it in an extended position of the limb, or during exertion, he will not distinguish the same parts. The contour, the swelling of the integument, and the fullness around the joint are not produced by the forms of the bones, but by the rising up of the parts displaced by the new position of the bones. The fatty cushions

which are within and external to the knee joint, and which serve the purpose of friction-wheels in the play of the bones upon



FIG. 4.—MICHAEL ANGELO.



FIG. 3.—MUSCLES OF THE ARM.

position of the bones. The fatty cushions

each other, no longer occupy the same relative places—they are protruded from the depth of the cavity to the surface. How well Michael Angelo knew this, these statues of Day and Night evince.

"In these statues great feeling of art and genius of the highest order have been exhibited; anatomical science, ideal beauty, or rather grandeur combined. It is often said that Michael Angelo studied the Belvidere Torso, and that he kept it continually in his eye. That fine specimen of ancient art may have been the authority for his grand development of the human muscles, but it did not convey to him the effect which he produced by the throwing out of those magnificent and giant limbs. Here we see the vigor of the sculptor's stroke and the firmness of his touch, as well as his sublime conception of the human figure. We can imagine that he wrought by no measure or mechanical contrivance; that he hewed out the marble as another would cast together his mass of clay in a first sketch. Many of his finest works are left unfinished; it appears that he found the block of marble in some instances too

* I might make similar remarks on the statue by John of Bologna—Jannarius sitting, shivering under a shower, in a fountain in the Villa Petraia, near Florence.

small, and left the design incomplete.* For my own part I feel that the finish and smoothness of the marble is hardly consistent with the vigor of Michael Angelo's conceptions, and I should regret to think that such a genius should have wasted an hour in giving softness or polish to the surface.

"Who is there, modern or ancient, that would thus voluntarily encounter all the difficulties of the art and throw the human body into this position, or who could throw the shoulder into this violent distortion, and yet preserve the relations of the parts of bone and muscle with such scientific exactness? We have in this great master a proof of the manner in which genius submits to labor in order to attain perfection. He must have undergone the severe toil of the anatomist to acquire such a power of design, which is hardly to be supposed could be sufficiently appreciated then or now.

"Without denying the beauty or correctness of the true Grecian productions of the chisel, they ought not to be contrasted with the works of Michael Angelo to his disadvantage. He had a noble conception of the august form of man—to my thinking superior to anything exhibited in ancient sculpture. Visconti† imputes inferiority to Buonarrotti; and to confirm his views compares the antique statues restored by him with the limbs and heads which he added. But I can conceive nothing less suited to the genius of the artist than this task of modeling and adjusting a limb in a different position from that which is entire, and yet so as to preserve the proportions and character of the

whole. The manner of his working and the urgency of his genius for an unrestrained field of exertion, unfitted him for that kind of labor, while it is a matter of necessity that a copy shall be inferior to an original.

"What the figures of Night and Morning had to do before the degenerate son of the Medici is another matter. They seem to have been placed there as mere ornaments, and in the luxury of talent to give the form and posture of the human figure, '*per ornamento e per solo spoggio di giacitura e de' forme.*'

"When in Rome I was impatient until I stood before the statue of Moses, so much had been said of its extraordinary merit,* and also so much of its defects.† It is a noble figure, with all the energy of Buonarrotti displayed in it. It is not the anatomy alone which constitutes its perfection, but there is the same mind displayed in the attitude, the habiliment, the beard, and all the accompaniments, as in the vigor of the naked shoulders and arms. It is the realization of his high conception of the human figure.

"My brother, in his 'Observations on Italy,' finds fault with the arm, and, perhaps, looking in one direction it may be imperfect; but this was one of many figures which were intended by the artist to ornament the great monument to Julius II., and, consequently, designed to be seen only in a certain aspect.‡ Besides, we ought rather to teach ourselves to admire what is esteemed excellent than to seek for defects. As to other criticisms on this statue, it should be remembered that it is an ideal figure as much as the Apollo or the Jupiter. From whatever notion derived, Moses is represented with horns rising from his temples, an adjunct which, placed either on the face of the antique or of common nature, would have been truly ridiculous."

To resume the subject of anatomy, we may take the opinion of Vasari;§ in addition to the study of the antique he recommends the frequent examination of the naked figure, of

* There is one unfinished production of Michael Angelo which discloses his manner of working; a statue of St. Matthew, begun on a block of marble so small that it appears to have restrained him. The figure is distorted, and he seems to have given up the work before it was more than blocked out of the marble. A contemporary gives an interesting account of the energy which possessed him while at work. "I have seen Michael Angelo, when above sixty, and not very robust, make more fragments of the marble fly off in a quarter of an hour than three vigorous young sculptors would have done in an hour; and he worked with so much impetuosity, and put such strength into his blows, that I feared he would have broken the whole in pieces, for portions the size of three or four fingers were struck off so near to the contour or outline, that if he erred by a hair's-breadth he would have spoiled all and lost his labor, since the defect could not have been remedied as in working in clay."—*Blaise de Vigenere*.

† Museo Pio. Clem.

* "Questo e Mosè quando scenda del monte
E gran parte del Nume avea nel volto."

† "E una testa da satiro con capelli di porco."

‡ See the account of this great work in the "Storia della Scultura," by Cicognara.

§ In his Preface, "Da che habbia origine il buon disegno."

the action of the muscles of the back and limbs, and the form and play of the joints; and takes occasion to advise the study of the dissected body, in order to see the true position of the muscles, their classification and insertions, so that by perfect knowledge of the structure the artist may with more security represent the figure in every varying attitude, bestowing through a knowledge of their action the proper swelling and contour of the muscles, according to their position and the force exerted; and from this, he truly observes, comes the power of invention, giving natural variety to the figures, as in the representation of a battle or great historical work.

And here I can not help expressing a belief that as it is necessary that the young artist should have an accurate eye to form, the drawing of the bones should be substituted for what is called the "round," that is, the fine, indefinite, and undulating surface of the

antique. By drawing the curious shapes of the thigh bone or tibia, he will sooner acquire a notion of external form than if set to draw a foot and ankle, or knee, without an idea of what produces the convexities which he is tracing. Drawing from the bones and from the skeleton will give him a desire for learning more, and afford an introduction to the classification and insertions of the muscles, with perfect ease in representing, either from nature or the antique, the slightly defined forms of the joints.

But, as we have seen in the works of the masters, let him avoid exhibiting the anatomy or displaying his knowledge, else he will fall into the caricature of Fuseli instead of attaining the vigor of Buonarroti. Anatomy is not to be displayed, but its true use is to beget an accurate observation of nature in those slighter characteristics which escape a less learned eye.

[TO BE CONTINUED.]

PHYSIOGNOMY OF THE INANIMATE.

BY INGERSOLL LOCKWOOD

THE ancients stood in a close and most beautiful relation to inanimate nature. To them the earth was not a cold, lifeless clod, but a kind, beneficent parent, clad in beauty and gifted with a sort of silent eloquence, which was unceasingly gladdening the hearts of her children. The seas, the rivers, the mountains, the valleys, the forests, yea, the very stones had tongues and ears. The rocks and trees were awakened by the tones of Orpheus' lyre; the poplars wept tears of amber; the oaks spoke with prophetic tongues; and as the mountains, the rivers, and the forests passed not from the world, like short-lived man, the ancients were led to attribute something immortal to them, to people them with minor gods and goddesses, ever-watchful guardians of their respective domains. At times, the inanimate was metamorphosed into the animate, and *vice versa*; Aphrodite sprang from the sea-foam, while Philemon and Baucis were changed into trees, an oak or a lime. In the beautiful fable of King Midas, the reeds are made to whisper in the wind, and thus betray his secret. Proteus could assume any

form he chose—sometimes that of fire, at others that of water or a plant.

Another proof that the ancients clung with singular affection to inanimate nature may be found in that species of poetry termed bucolic, or pastoral, in which Theocritus attained eminence. Art and imitation are ignored in this kind of poetical composition; the rural feeling exerts its suave influence over the bard; inanimate nature, bathed in a soft *coulour de rose*, becomes endowed, as it were, with the gift of speech. The rustling of the leaves, the sighing of the zephyr, the whispering of the grain, woo the listener like twice-echoed music, diverting every thought from the refinement of city-life, and gently drawing him into the arms of nature.

After the extinction of the political independence of Greece, which took place B. C. 146, the Romans acknowledged the intellectual superiority of the Greeks, by proceeding to imitate their writers in every branch of literature. But it was not until some hundred years later that Virgil, thoroughly conversant with the Greek language and litera-

ture, was destined to attain such eminence by the composition of his *Eclogues* and *Georgics*. Here, again, we find that boundless love for inanimate nature and country life. The poet discourses rural enjoyments and the happiness resulting from the absence of art, imitation, and the so-called refinement of city-life. Most soothingly must these strains have fallen upon Roman ears, when the din of war and revolutionary tumult had ceased.

Having now ended our cursory glance at this wonderful attachment to inanimate nature, as it existed among the nations of the ancient world—a glance which, however cursory it may be, has been deemed necessary as an introduction to the following remarks upon the physiognomy of the inanimate—we shall now endeavor to show that a manifest drifting away from nature has taken place.

Of a truth, primitive Christianity was idyllic in its character; for Christ loved the mount, the lake, the garden, the vineyard, the field, and the trees, and looked upon large cities as great centers of corruption and wickedness. This may be attributed partly to his want of success in Jerusalem, and partly to his strong rural feeling, which prompted so many of his parables. Certain it is, however, that ere many centuries had elapsed, Christianity became a religion of the temple, the basilica, the church. In vain the bright sunlight endeavors to pierce the painted windows of the Gothic cathedrals. All is gloom within them, and the tapers throw a tremulous glimmer over the crucifix and altar. And still, *that* light was too strong. Behind the dark curtains of the confessional the priest retired. What a thing of darkness was thus the issue of that bright sermon on the Mount, with the beautiful earth beneath and the beautiful sky above!

In the Mohammedan religion we likewise find this same drifting away from nature toward art. Inspired by the solitude of the desert, it is ere long transferred to the gorgeous mosque. But Mohammed was not unmindful of the strong love for nature prevalent among his people; for in his Koran he promises his faithful gardens irrigated by rivers, and groves of perpetual shade. Further proof that this tender attachment of inanimate nature, this strong rural feeling, so

manifest among the ancient Greeks, Romans, and primitive Christians, is decreasing, may be based upon the fact that the wealth, power, and talent of nations are rapidly becoming concentrated in their great cities. There is a manifest tendency to construct; it is the age of monuments—everything is hewn or molded; it is a level-loving age—hills, mountains, and deep valleys are hated, because they lessen the speed of travel. True, our poets still write pastorals; but their peasant girls and shepherdesses are generally ladies and gentlemen, just as the Romans of many of the French tragedies are in reality little more than Parisians of a dignified type.

Having thus briefly alluded to the close communion existing between the ancient world and inanimate nature, and the consequent birth of pastoral or idyllic poetry, and having also called attention to *our* manifest drifting away from nature—the result of our utilitarian proclivities—we now enter upon the examination of our subject proper, and shall endeavor to show that this physiognomy of the inanimate is something absolute, objective, intentional on the part of the Creator, as it were a sort of experiment in shapes, contours, and colors prior to the creation of the animate.

In 1728 the eminent English surgeon, Cheselden, gave sight to a lad of fourteen years of age, who had been blind from birth, by the wonderful operation of couching. From the particular account of the various experiments made by Dr. C. upon the new sense thus given to the lad, we are led to conclude that colors possess a most remarkable physiognomy, some being delightful and pleasing, others disagreeable and repulsive. This lad gazed with pleasure upon the different tints of rose, blue, green, etc., while he shrank with aversion from the darker colors, and almost with horror from the black. Nor can it be claimed that this was the result of education or association, he having been born blind. We are, therefore, justified in looking upon the results of Dr. Cheselden's experiments as proving that those colors so profusely spread over inanimate creation were intended to draw man close to nature, and hold him there in a sort of life-long fascination. How vividly does

black portray death; red, danger; and white the absence of it! Scarlet has a singular effect upon the savage; it charms, entrances him, as it were, while it throws many of the brute creation in paroxysms of rage. The pleasing physiognomy of blue, yellow, and golden tints led the ancients to attribute these colors to the eyes and hair of many of their gods and goddesses. We read of the "golden locks" of Apollo; and Virgil assigns "yellow hair" to Mercury; while the modern Italians speak of Cupid as the "blonde god." Homer, in mentioning Minerva, calls her the "blue-eyed maid." This innate love of the azure and the golden, doubtless, influenced the ancients to apply the name of heaven to those beautifully tinged clouds which envelop the earth. The summit of Olympus, wrapped in such beauty as this, was a worthy location for the residence of the gods. But as the development of Christianity tore off this gorgeous coloring from the mount, and laid bare its rocky waste, so the progress of learning is rapidly teaching man that if he would be near to God, 'tis elsewhere than amid these painted nothings that he must seek him.

Although in comparison with the sublime architecture, the beautiful groupings of contour and color, of the great builder, the work of man's hands seems most strikingly tame, stiff, and harsh—for what columns can vie with the giant cedars of the Pacific slope? what fretted ceilings compare with the stalactites of the Mammoth Cave? what canvas glow with that "crystalline delight" of a starry sky?—yet it, too, at times, possesses an unmistakable expression of life. In every age, in every land, man, acting under the creative instinct of his divine nature, has not only striven to counterfeit the human form in wood, stone, and clay, but he has ever and untiringly sought to endow the inanimate with motion—Prometheus-like—motion being, at best, a seeming approach to life. Therefore, the sculptor was wrong when, upon the completion of his statue, he exclaimed, "Speak!"—he should have said, "Move!" By giving motion to the water, the clouds, the trees, etc., an all-wise Creator established a wonderful bond of sympathy between the animate and inanimate, for the waters talk when they run, the leaves whis-

per when they stir, the clouds speak to us when they change their colors, positions, and shapes; or, as the poet has expressed it,

"The deep skies assume
Hues which have words, and speak to ye of heaven."

It is this mysterious bent, this strange longing in man's nature to produce motion that led Watt to the steam-engine, Arkwright to the spinning-jenny, Fulton to the steam-boat, Howe to the sewing-machine. Thus, too, was the ancient Egyptian architect induced to make his temple appear like a thing of life by avenues of sphinxes, rows of colossal statues, and *bassi relievi* of fabulous deities and heroes. Without a doubt, the first entablature rested upon images of human beings. This was the nearest approach possible to life, and the most natural result of that "fire from heaven" glowing within the breast of man and ever prompting him to imitate the animate forms when handling the plastic clay. The merest savage shapes his idol after his own image, reasoning, more or less, like all the founders of religion, that the creator's work must resemble the creator, whom, consequently, they picture as anthropomorphous.

But to resume. These "natural columns" we find among the Greeks under the name of caryatides; and why is it not reasonable to suppose that the splendid orders of Grecian architecture are but the offspring of these "natural columns?" Could not the human head, with its ringlets of hair, have become the volute of the Ionic? and could not the limbs of those caryatides have sunken away into the fluting of the column?

Many cities possess a most marked physiognomy. Some, as you enter them, are radiant with welcome; others almost receive you with a scowl, their gloomy walls frowning upon you, their silent streets seemingly mute from despair, their dark alleys facing you at every turn. London and Paris are vastly different in this respect: the former has nothing inviting about its exterior; the façades of its public buildings have a dirty look, and, to speak tritely, don't seem to be ready for company. To like London you must visit the homes under their blackened roofs, become acquainted with English life, a recipient of English hospitality. Paris, on the contrary, has a bright, happy, cheerful look,

an *entrez-vous-plait* expression, an exterior with a strikingly hospitable physiognomy. Many of its squares have a reception-day-like appearance, while its boulevards absolutely hold on to you like an exceedingly polite host. Berlin, likewise, has a bright and cheerful air about it. Vienna is all sociability and stands with its doors always open, while its countless bells are ever ringing out a welcome to the stranger. Swiss towns have a sleepy look about them, half in a doze they nestle at the bottom of some green velvet-lined valley. Shut out by their cloud-piercing mountains from the rest of the world, these towns are seldom girt with frowning, forbidding fortresses, crowned with lines of those iron monsters, which even sleep with their fearful jaws wide extended, that they may never be unprepared to destroy. But, it may be urged, the work of man's hands must, to a greater or lesser degree, be a reflex to his character, and, therefore, we pass on to natural objects and thus overcome the objection.

When Hamlet pointed out a cloud shaped like a camel, then forthwith called it a weasel, and then a whale, he either saw these objects in his "mind's eye" or else was purposely exaggerating. Be this as it may, no one will deny that the heavens frequently do present strange figures, fantastic outlines, and striking physiognomies to the careful observer. It would be a difficult matter to say what people it was who first discovered the "man in the moon." As far back as 1300, Dante led us to believe that a certain physiognomy had been attributed to the moon, for in the XX. canto of the *Inferno* he speaks of "Cain and the thorns" (*Caino e le spine*) when referring to the moon, the popular notion being, as is stated in explanation of this passage, that the marks upon its surface represent Cain with a bunch of thorns.

That Constantine saw the figure of a cross in the sky is most likely. When men's minds are agitated with the thoughts of some great approaching event, they become strangely susceptible to the influence of inanimate nature. Who can blame that intractable, old reformer, Luther, for having, in a moment of great mental agitation, hurled his inkstand at the imp of darkness? After you have extinguished your light, let the

moon's rays have full play in your sleeping-room and mark well the result; for truly

"The forms of the grim knights and pictured saints
Look living in the moon."

Yes, even more: articles of clothing assume the appearance of standing or sitting figures, while heads, brute and human, are traced in tremulous outlines upon the walls. Assuredly, in such a studio, many a fairy tale, many a fantastic recital of the doings of some weird master, has been conceived in the mind of some Andersen.

There is a dreadful physiognomy about flame; all nations, with one accord, speak of "tongues of flame," and how they "lick" the doomed edifice. On the other hand, I am credibly informed that the sailors of coasting vessels absolutely learn to love the light-houses located upon the dangerous points, and speak of them in such terms of attachment as fall strangely upon some ears. Doubtless these beacon lights shine upon the sailor like an all-seeing eye, reminding him of the milder glimmer of eyes at home.

It might not be prudent to give credence to all reports concerning that fantastic friend of our young days, the jack-o'-lantern, and how he enticed the late traveler from the beaten track into the neighboring swamp, but certain it is that the brute creation and even man, also, gazes upon fire with innate feelings of awe. The vision of the "burning bush," the vestal fire of the Romans, the ever-burning lamb of the Catholic Cathedral, and the fire worshipers of the Orient are all examples of this. The sight of flame has a wonderful effect upon the brute creation, irresistibly attracting some and mysteriously repelling others; utterly depriving some species of the power of motion, and filling others with a terror that even robs them of all dread of man.

Happily, however, nature, as a rule, presents herself to man in pleasing forms, agreeable phases, and wears, for the most part, a beautiful mask over her more frightful features. What a fearful aspect would the Alps present should one strip them of their robes of eternal snow and expose their black and rugged sides by removing those magnificent rivers of ice which reach down to the very verdure of the smiling valleys! With what feelings of horror would one wander through

the chambers and galleries of the Mammoth or Howe's Cave were they robbed of those splendid tufa formations, which one moment rise before you like an alabaster throne; at another, present themselves to your entranced gaze like groups of antique statuary. And now, in seeking for an explanation of this wonderful "affinity" existing between man and inanimate nature, one is led, at first thought, to attribute it to the increased health and consequent happiness which falls to man's lot when he turns away from the artificial life of those large cities, where mankind accumulates, like the alluvial deposit of a great river, stratum upon stratum, and draws close to nature. Or, probably, another would insist that it is due to the beautiful colors with which nature paints her landscape and her sky, repeating tint for tint in the mirror of her lakes. But neither of these explanations is satisfactory, for in the first case it would follow that the invalid is a greater lover of nature than the man of health and strength, a concession not to be made; while, on the other hand, the second explanation would not account for that strong love of inanimate nature found in those who are, to a degree, color blind, and also in those whose ears detect no difference between perfect and imperfect chords in music. We are, therefore, obliged to have recourse to the configuration, to the physiognomy of nature, in order to explain this sympathy, as it were, existing between the Creator's last and former labors. As "nature abhors a vacuum," so she may be said to love a curved line. We search in vain for a straight line in the Apollo Belvedere, in the group of the Laocoon, or in the living human form; so, too, in inanimate nature the curved line predominates, the hills are rounded, the valleys slope gently, the rivers flow more or less in serpentine courses, the shores of the lakes are indented with curves, the trees bend gracefully beneath their fruit or foliage, the vines climb in beautiful spirals, leaves, buds, and flowers present, more or less, the graceful ovals found in the human face and form. Man alone proceeds in straight lines, man alone, between two points, takes the shortest route, and therefore it is that the temple, the basilica, the monument, and the pyramid impress us, though by their angular regular-

ity, by their grandeur and solidity, they can never persuade us to take up our homes beneath their shadows, and not long for

"The fields, the lakes, the forests, and the streams."

THE ADULTERATION OF FOOD.

HIGH WAGES AND HIGH PRICES.

THE London *Daily Telegraph* observes that nothing would be easier than to collect a budget of droll sayings and comic anecdotes concerning adulteration,—to relate how the sanctimonious grocer bade his apprentice, when he sanded the sugar, watered the tobacco, and roasted the horsebeans for the coffee, come to prayers; to tell how ground glass once commonly went under the trade name of "P. D." or pepper dust, and was actually mixed with that condiment; and to glance at all the stock stories about "Mungo," or "Shoddy," or "Devils' Dust," as used in the sophistication of woolen cloth; about the Venetian red earth and tallow in cocoa; the copperas in pickles; the cocculus indicus and grains of paradise in beer; the turpentine and vitriol in gin; the sloe-leaves and chopped birch brooms in tea; the suet and water in butter; the unutterable and unknown nastinesses in cheap sausages. With the truth or the falsehood of most of these oft-told tales we have, for the present, nothing to do. The adulterator, it can not be too plainly or strongly pointed out—whether the food he garbles be intended for the sustenance of man or for animals, on which mankind feeds—is a public enemy. He whose wares poison the stomachs of pigs or poultry, comes at last to poison ourselves, since we eat the flesh, the wholesomeness of which has been deteriorated by improper food. We are not among those who would needlessly aggravate the severity of our criminal code, or impart the spirit of Draco into our mild jurisprudence, but if there be one offense which of all others calls for condign, severe, and ignominious punishment, it is that of the adulterator of food. He scatters his poison broadcast, and sows disease—perhaps death—over the whole face of society.

[The London editor is right. But what about quack doctors, who concoct for human stomachs poisons which send their victims to untimely graves? What should be done to the maker and vender of the vile compounds called bitters, of which whisky and fusil oil form so important parts? Let us chase the vampires out. They are unworthy of civilized society.]



NEW YORK, NOVEMBER, 1872.

PRAISE.

ENCOURAGEMENT is one thing, and mere flattery is quite another. He must be an arrant egotist who praises himself; and he who does it, simply disgusts those who hear him. One must, indeed, be very dull who can not discriminate between honest encouragement and false flattery. Honest praise is healthful mental stimulant, and makes one grow in the direction of good resolutions and nobler deeds. There are those who never praise, but who often blame. "All are miserable sinners," utterly unworthy a blessing, and who, if rigid justice were done to them, would be consigned to "everlasting punishment," and so forth. This sort of dogmatic theology grows out of total depravity teachings, and casts gloomy shadows all along the paths of life, driving not a few into hopeless despondency, insanity, and even suicide! But better views are now prevailing, and we no longer crucify each other for opinions' sake, or hang or burn human victims suspected of witchcraft, Quakerism, Christianity, or Mormonism. We are outgrowing ancient theology and old superstitions, and are beginning to bask in the brighter sunshine of new and better views, such as are sanctioned by a better interpretation of the Scriptures and *true* Christianity. Read what Rev. Hugh Miller Thompson says in his book entitled "Copy" on the subject of praise:

"There is nothing better for a human being sometimes than a little hearty praise. Many good people conscientiously act on the directly opposite, and seem to think nothing better than a little hearty blame. They are mistaken, be conscientious in their

blame as they may. There are sore burdens enough in life, bitterness and pain enough, hard work enough and little enough for it, enough to depress a man and keep him humble, a keen enough sense of failure, succeed as he may; and a word of hearty commendation, now and then, will lighten his load and brighten his heart, and send him on with new hope and energy, and if he have any reasonable amount of brains at all, will do him no harm.

"Children are sometimes heart-starved for a little hearty praise. Conscientious teachers and parents refuse it on principle. They are conscientious fools for their pains. Boys will act up to the estimate put upon them, or at least try to, if they are worth their salt. A hearty word of commendation is meat and drink to them for the next endeavor.

"It is so with men. The strongest of us can not work without some recognition of our work. We want to know that it is considered good. Our own judgments are not sufficient for us. A 'well done,' now and then makes us certain of better doing still, in the future.

"We are not speaking of the silly nonsense of flattery. We mean sensible, honest, hearty commendation, because a man deserves it. We mean the showing that a man's good work is appreciated, that the doer is regarded for the doing, and that other people are happy in his doing, and want to cheer him on to do more. It will not hurt anybody, boy or man. To hold it back often does great harm, and inflicts on many a sensitive soul sore pain. For our own part, we consider it only an honest man's duty when he sees another man doing good work, faithful and hearty service, and doing it well, to say so; and, if it will help him at all in his work, to say it to him freely and heartily.

"Sincere commendation is the wine of life. He who withholds it, when he can give it, is a churl. He may be a pious churl, a conscientious churl, a churl from the best motives, but he is a churl nevertheless."

[Let fathers and mothers praise their sons and daughters for worthy deeds, and they will try to merit a continuance of their approval. Blame, scold, find fault, or ignore their efforts, and unpleasant consequences will follow. Let husbands praise their wives, and wives their

husbands, when they merit it, and keep their mouths inclining *upward* at the outer comers. It is a good thing to praise.]

IS EMERSON A PHRENOLOGIST?

THE following extract from his recent address before the law students of Howard University must decide :

"EVERY MIND HAS ITS SPECIAL CAPACITY.—I am of the opinion that every mind that comes into the world has its own specialty—is different from every other mind; that each of you brings into the world a certain bias, a disposition to attempt something of its own, something *your own*—an aim a little different from that of any of your companions; and that every young man and every young woman is a failure so long as each does not find what is his or her own bias; that just so long as you are influenced by those around you, so long as you are attempting to do those things which you see others do well, instead of doing that thing which you can do well, you are so far wrong, so far failing of your own right mark. Everybody sees the difference in children. They very early discover their tastes. One has a taste for going abroad, another for staying at home; one for books, another for games; one wishes to hear stories, another wants to see things done; one is fond of drawing, the other can not draw at all, but he can make a machine. This difference, as you advance, becomes more pronounced. You are more distinct in your conception of what you can do—more decided in avoiding things which you can not and do not wish to do. Now, I conceive that success is in finding what it is that you yourself really want, and pursuing it; freeing yourself from all importunities of your friends to do something which they like, and insisting upon that thing which you like and can do. One person persists all the time in disappointing his friends because he wishes to be a painter, and they have no desire that he should be. Another does not like that his father should insist upon sending him to college, because he really wants to be a merchant or a manufacturer, or has a whim of his own. Now, that is easily mistaken by an obstinate young man who has

taken a fancy and is not really pursuing that which is his proper calling. Though one may easily be mistaken for a time, yet there is in his mind this particular fitness for a calling; and some things that he can do, as in mathematics, or the right arrangement of facts, he being able to distribute the duties of the day; the distribution of facts in his mind, so that he understands and can recite history better than any other; or the perception of his aim, and keeping that through all the particulars by which a logical mind acts, in various ways, as some eyes are made for color and some for form."

Mr. Emerson is quite right. Our peculiar aptitudes are as various as are human tastes and human pursuits. But it does not follow that one may not, by culture and discipline, attain to a good degree of proficiency in that for which he has no special gift. Take Language, for example. One may be an indifferent talker, writer, or speaker—or a bungler in either—and by long-continued practice, drill, and discipline, he may acquire tolerable proficiency in one or all. So in music, mechanism, art, generosity, economy, application, devotion, integrity, or in any and all the virtues, *we can improve*. And this is the encouragement which Phrenology holds out to every human being. The methods of improvement may be different, but the fact exists, and each of us may restrain tendencies to excess; encourage to action and growth those organs and faculties which are weak or deficient, and thus attain a character more symmetrical, harmonious, and perfect.

A very common error is practiced by parents and teachers, to the injury of children and students, which consists in pushing them in the direction of their strongest tendencies, to the neglect of others more needed. For example, if a child exhibits a genius for music—like Blind Tom—he is kept at the practice of music without regard to other traits or qualities. He may be, in other matters, almost an imbecile, ignorant of everything else, only so that his music may be turned to profitable (pecuniary) account.

Thus we have many warped or one-sided characters, owing to the warped and one-sided education given them. One who runs in a rut all his life will not exhibit a broad

and comprehensive mind or character. He will be a bigot, a dwarf, or an imbecile. What the world wants is men with full-orbed minds. Shall we have them?

STATE PRISON LITERATURE.

FROM the New York *Express* we take the following apt remarks:

We are glad to see the religious journals of all classes demanding a more rigid enforcement of the laws with reference to the sale of vile literature calculated to corrupt the minds of youth. The *Episcopalian* says:

"The news stands at every corner are stocked with pictorial abominations which are a disgrace to the community, and if a squad of police were ordered out to burn them on the spot, the department would have the thanks of every decent man and woman on Manhattan Island. The police, recently, have been invested with all the executive powers of the Board of Health, and the summary abatement of multitudinous nuisances has been the result. Let them now assume the functions of a moral board of health, and rid us of these pestilences, and their fellow-citizens will be obliged to them. Let us have no half-way work with it."

But few of the *Express* readers probably have any idea of the extent of the traffic that is carried on in this branch of the devil's business. Ten-cent novels are printed by the hundred thousand, and scattered like snowflakes all over the country. The police bear testimony to the fact that most of the youths between the ages of 12 and 18 now in the State Prison and Penitentiary for burglary, theft, and kindred crimes, began their career by reading these vile publications. The very title of them is enough to stamp their character. Here are a few, taken at random, from a catalogue on the fly-leaf of a "Life of Dick Turpin, the Highwayman," which constitutes a leading feature of the "popular novel" business:

FIFTEEN CENT ROMANCES.

Mysteries of the Night.
"Will Waffles."
Old Hundred Scalps.
The Hand of Death.
Red Thunderbolt.
The Robber Chief.

Serpent Eye.
The Black Mask.
Black Lady of Duna.
The Outlaw's Doom.
Red Arrow.

INDIAN NOVELS (TEN CENTS.)

Wild Joe.
Forked Lightning.
Big Knife.
Dick Whiffles.
Crack Skull Bob.
Buffalo Bill's Last Scalp.
Knock'em Down Nick.
Devil's Eye.

Wild Bill's Best Shot.
The Boy Warrior.
Sly Dick.
The Boy Scalper.
White Rattlesnake.
Giant Bravo.
Big Wraslin' Joe.
Thunderin' Jack.

POPULAR NOVELS (TEN CENTS.)

The Landlord's Crime.
The Hearts of Steel. [ers.
Molly McGuire's Reveng-
Rebels of Wexford.

Mysterious Murder.
War-Path.
Buffalo Bill's Ride for Life.
Jack Sheppard.

If we punish druggists and druggists' clerks for selling strychnine, arsenic, and other mineral poisons, to children—how much more deserving of punishment are the manufacturers and venders of these moral poisons! It is no use trying to shame them out of their vile trade; if that were possible, the appeals and remonstrances of the press would long ago have been heeded. The only remedy left is the law, and if the law is not strong enough or ingenious enough to reach them, by all means let it be straightway amended, so that all who offend against it shall receive his deserts.

[That the public mind has been terribly *perverted* by the stuff peddled out by newsmen, called "light literature," there can be no question. It is next to impossible for the most vigilant parents to protect their children from obtaining and perusing these demoralizing and degrading cheap stories. The only hope is in a general rising of the people to put it down by law. Let every good citizen who would save the youth of our country from contamination, help to extinguish this great and growing evil.]

HORSES FOR OUR FIRE DEPARTMENT.—The *Evening Post* says: "Great care must be exercised in the choice of horses. Good temper is absolutely necessary, and they have to undergo severe training. They must not be alarmed at fire, smoke, or sparks; they must pay no heed to steam-whistles, excited crowds, men running hither and thither, the crackling of flames, nor the glare of a burning building. They must combine speed with strength, and they must learn to obey promptly and willingly even the slightest order.

[The Morgan horses are, as a class, admirably fitted for such uses. They have broad heads, indicating courage; are broad between the eyes, indicating intelligence or capacity for receiving instruction; and they are docile, kindly, tractable, and affectionate. Try the Vermont Morgan horses for the Fire Department.]

Department of Literature, Science, Education.

INSTINCT AND REASON;

OR, SOME PASSING RESEARCHES IN SPIDERDOM.

BY AZZA ARTEM, M.D.

HAVING occasion to establish a literary sanctum in an unfurnished room of an unoccupied house, I spread a table against a window, extemporized a few shelves, disposed an assortment of books promiscuously, arranged inkstand, paste-pot, pens, pins, pencils, note-paper, foolscap, sealing-wax, and rubber, and sat down to my work, as I supposed, with none to molest. But I had reckoned without my—spider. I had not finished the first preface to the first book of many prospective ones, before an eight-legged *arachnid* (Owen on the *Invertebrata*) disputed possession. He claimed a pre-emption. He might have been a squatter. He was evidently a land-shark of some sort, and he had nine points of the law—possession under color of title. I had read that Bergh, the anti-cruelist, had prosecuted a "restaurationer," for ill-treatment of turtles, and concluded it might not pay to be harsh to a spider. So I resolved to observe the ways of the adversary for a while before proceeding to extremities.

The next morning my spider had staked off one-third of the disputed territory to himself. Did not this indicate prescience, imply calculation, and prove reasoning—a *priori*? When railroad men in New York wish to evade the injunctions of the courts, they lay the tracks in the night. Is not the mental operation and animus similar in the two cases? Attaching his web (it was *he*, as I afterward learned) to the pen-and-pencil-holding framework of my inkstand (stygian pool), he had extended his inclosure the whole width of the window, using the edges of my invaluable books and dubious manuscript as points of attachment for his gum-elastic fence. My immediate impulse was to eradicate the pretender, and exterminate his works with one fell sweep of a feather-duster, but second thoughts prevailed. On maturing the reflection in my mind, I had some doubts as to his motives and accountability. His proceedings might be instinctive, hence not blameworthy. Only reasoning beings are sinners. My better judgment and merciful disposition determined to "let the reptile live"—until further notice.

Night after night (day after day he was as workless as an owl) he improved, consolidated, and adorned his domicile. He constructed a suite of rooms with communicating halls. The principal apartment, however, served the manifold purpose of kitchen, dining-room, and parlor. As he labored during the night he did not need any sleeping-room. He was solitary. No company had he unless nocturnally. He never invited any stranger within the gates. Nevertheless, he had a fashion, more forcible than polite, of taking fellow-insects to himself. What more he did with them I shall leave to the reader's imagination. Suffice it to say that instinct is always unreasonable. When a man entraps, deceives, cheats, or otherwise destroys his fellow-man (witness Wall Street) he probably acts instinctively. It can not be reasonable, surely.

I noticed that whenever a flitting fly, a war-dering bug, or a zig-zag miller got a foot or the tip of a wing entangled in the intricate meshes of his webbed surroundings, quick as the lightning's flash (the millionth part of a second) the predaceous creature would dart upon it, and bear the buzzing victim to

"The prettiest little parlor that he ever did espy."

Before many days other spiders located in the region round about. They took possession of the upper corners of each pane of glass, and spread their nets several inches round. Others established themselves in the corners of my room, and a couple of diminutive specimens of their kind erected "shebangs" on the under side of my table. I was summoned, but would not surrender. I knew I was the stronger party. I could avert their depredations at any moment. But what if they should propagate their species by millions, billions, trillions? A sufficient number of musquitoes may kill a horse. Owen says that the *aphis linigera* (a fly insect) will produce in the tenth generation from a single pair thirty quintillions! How prolific may not the spider prove to be!

I formed a saving resolution. It might be termed a moral sinking fund. It was to redeem me whenever I was past redemption. As the moderate drinker resolves most sol-

emply to leave off drinking entirely if his appetite for liquor ever becomes so strong that he can not govern it, I concluded that, as long as I was master of the situation, to let the spiders proceed, determined, however, that when they became so numerous as to render me powerless against them, I would extinguish them utterly.

It so happened that the spiders did not overpower me, therefore I did not obliterate them, but permitted them to remain as co-tenants during the season; watched their doings, offensive and defensive, observed their various orders of architecture, noticed their different modes of catching their prey, studied their method of rearing their young, and became familiar with many of their social arrangements and domestic habits; and if I should write a ponderous book entitled "Curiosities of Common Spiders," I could not relate all the queer things, some comical, others tragical, that occurred in my sanctum among the spiders and their fellow-beings, and between them and their fellow-insects — orders, *Diptera*, *Lepidoptera*, *Hymenoptera*, *Hemiptera*, and *Neuroptera*—

"All which I saw, and part of which I was."

I propose, therefore, to apply the interesting data of my remarkable observations to the elucidation of the problem: whether an octoped can reason like a quadruped, and both like a biped. I may say, by way of introduction, that I see no reason why not. I placed numerous spiders in difficult situations, requiring ingenuity, calculation, and great mental resources, and always found them equal to the occasion. More than this can not be said of Grant or Greeley. Was it instinct or reason that directed and planned? Naturalists tell us that some tribes of ants war upon other tribes, and that the conquering party make slaves of their prisoners. Call you this instinct? If a spider, placed in a peculiarly perplexing predicament, acts as a reasoning and reasonable human being would under similar circumstances, does not the spider reason? Shall we apply the term "reason" to an act because a man performs it, and the term "instinct" to the same act when performed by an animal? This would render the words meaningless. A human being eats, drinks, and breathes. So does an animal, and so does a vegetable. Here is instinct, pure and simple. Instinct is a vital, not a mental process, or a quality. A man builds a house, kills and eats animals, traps and ensnares them, reduces them to servitude, rears and educates offspring, and lays up treasures on earth. And all this

the animal does. Young children manifest the dominating propensities of their parents as soon as they can toddle; and infantile spiders, before you can fairly see them with the naked eye, spread their infinitesimal nets and catch flies twenty times as large as themselves.

Having seen more of the "inner life" of spiders than of any other specimens of animated nature (unless the "higher animal"—homo—is an exception), I have arrived at the conclusion, by the "irresistible logic of events," that they are "more subtle than any beast of the field;" and I am almost persuaded that for unmitigated rascality and innate cruelty, the spider can better typify the Evil One than any serpent can.

Other animals are also carnivorous. Howbeit some will not eat their own species. Human beings are cannibals on occasions. They are omnivorous generally. Vegetarians are practically exceptional. But who, which, or what, except the spider, will devour *her* conjugal companion? I use the feminine personal advisedly. I would not have believed this without ocular demonstration. Is it because she loves him so? The reader will remember the anecdote of the fond husband who, when first married, loved his wife well enough to eat her, and who regretted ever after that he had not done it. But this may have been the romance of fiction. With our spider it was a reality of killing.

A few days after the hero of our story had become comfortably settled in his new and beautiful habitation, a "companion for life" came along. She was apparently of suitable age, temperament, color, and other accomplishments for a congenial help-meet. She was black as tar—I mean cimmerian darkness. He was grey as a rat—I should have said, clad in the sober livery of the evening twilight. She was received with as much cordiality, if with less pomp and circumstance, than when Solomon received the Sheban Queen.

I saw *Mr. Spider* no more. The "better half" appeared occasionally at the front door, ever and anon gobbling up an inquisitive fly. I speculated concerning *his* fate. Do married spiders disagree? Have they a Chicago? Perhaps the "head of the family" is on a foraging expedition. Possibly he has put *Mrs. S.* in charge of the premises while he is seeking a still more promising land. Peradventure my motions in handling books, pens, pencils, scissors, and folder had been misinterpreted as preparations for war. Certainly it would have been a "blunder worse than a crime" for the

"happy pair" to contend against my formidable armament.

I remained in disagreeable suspense a week longer. Mrs. Spider continued her vocation as though nothing had happened. I would like to know how "Union for Life" is developed in the arachnids, the female head especially. At length my curiosity became intolerable. I brought a microscope to bear on the innermost recess of this fiendish female insect, and there beheld—

"Horror on horror's head accumulate"—

the eight legs of our hero (that was) lying around loose, only as they were held together by a shred of ligamentous tissue. The ferocious feminine arachnidian had devoured the body, leaving only the indigestible extremities.

"Cunning and fierce—mixture abhorred." Thomson was right. But it was hard to credit the evidence of my senses. Might it not be a terrible illusion? a frightful dream? a spectacular fantasy? I wanted "confirmation strong;" and if this misdemeanor without a name could be proved against the prisoner at the bar, the whole suctorial race should be annihilated, as far as my office was concerned.

On referring to the works on natural history, the painful conundrum was soon solved. Huxley seems to know nothing about the normal relations of female spiders to their husbands; but Huxley's work does not go down below the vertebrata (or *up*, if man has "descended"). Owen, however, informs us that this proceeding is nothing unusual. It is the nature of the spider (the female one) to do so. The spider is an extreme utilitarian; if she has a friend, she makes the greatest possible use of him. Why not? After *he* has performed his other duties of life, can he be more useful than as food? I think the principle is not unfrequently exemplified in the domestic sphere of the "higher animal,"—all except the literal eating; of the killing there is no question.

But I must doubt whether this cannibalistic nature of the spider (female) is original. I suspect it is an acquired habit. Some dire extremity, impending starvation perhaps, with dearth of flies, may have induced the gentler sex to feed on their luscious lords, thus introducing a fashion which seems anything but appetizing, viewed from the standpoint of the male persuasion. If, however, this development of Alimentiveness was the nature of the "best gift" to the male spider from the beginning, my quarrel, if I have any, lies in another direction. Nature must be blamed, or nothing. I can not censure nature for anything.

"Whatever is"—etc. Nor can I justify the transaction we are considering. The spider is excusable for being a spider; that may have been *his* misfortune, but it was not *her* fault.

Alone and in renewed single-blessedness this female member of the homogangliate invertebrata still lives, moves, and has her being in the house of her digested predecessor. Her diet continues to be, in medical parlance, "plain, simple, nutritious," that is to say, restricted to plentiful flies, moderate bugs, and an occasional miller. Meals vary from one a day to a hundred. I wonder if anything (except man) can reason and not have a conscience? Does no apparition ever disturb her slumbers (does she ever sleep?) in the witching hours of night? Do not

"Hollow moans, and dismal groans, and sounds of injured ghosts"

sometimes remind her that those eight legs are bodiless? Does she not in meditative moments regret the departed—I mean the digested? Does she never dream of vengeful goblins, nor exclaim in demi-semi-delirious agony, "Thou can'st not say *I* did it?" No second loving spider has proposed for "no better or much worse;" and I sometimes imagine that, as she sits in noncompanionable sadness contemplating whom she will next devour, her countenance expresses contrition for the one great error of her life, and that she wishes she had spared her devoted husband and dined on some of his relations. With the aid of a powerful Cardington lens I thought I discovered the "spirit of aquosity" in her eyes. Perhaps they were "penitentiary tears," proving that the insect, like some human beings, is not totally depraved.

For scientific investigation the spider occupies the most important position in animated nature. It (neuter gender for the present) is the medium between the extremes, the half-way place in the animal kingdom. It is to organic existence what the pistol-ball is to the physical universe. If you magnify the bullet to the size of the earth, it is just as much larger than the primary molecule or original atom as the largest planet is larger than the bullet. The average spider is half way, and, therefore, the connecting link between the smallest living monad or diatom and the largest animal; that is, it will require as many millions of trillions of the minutest organisms to equal the bulk of the spider as it will require spiders to aggregate the size of the megatherium. An ordinary drop of water contains millions of billions of molecules. The wings of a fly, when both

feet are fast in the spider's most attenuated web, vibrate nearly four thousand times in a second, but without result. The extreme chemical wave of the spectrum is recorded at nine hundred and forty-four trillions per second. We are moving in space (or etherium) more than two millions of miles per day. The finest gauge made at the watch factory in Marion, N. J., is only 1-170,000 of an inch in diameter. Matter, in its last analysis, becomes motion. The spider's thread that will suspend a huge insect in mid-air, which you can not see with the unmicroscopic eye, is composed of innumerable smaller threads braided together with a skill no human workmanship can excel.

Perhaps the reader does not appreciate the relevancy of these curiosities of knowledge. Nor does the writer.

How is it that a predaceous animal always knows the assailable point of every other animal? How does every animal, predaceous or non-predaceous, always know the best possible plan of escape or defence? Is this *knowledge*, instinct, or reason? Is knowledge instinct? or is instinct merely blind impulse? Corner a flea, a mouse, a rat, cat, dog, tiger, hippopotamus, or whale, and if there is a possible way of safety it will find it. The lion and the gorilla (Du Chaillu) are so evenly matched that whenever they come to close quarters both are invariably killed. The wolf will sever the hamstrings of a horse and worry it to death. Two vultures will subdue a buffalo, one attacking it in the rear while the other picks out its eyes and bites off its tongue. The lion, tiger, panther, and dog dispatch the deer and sheep suddenly by opening the jugular vein.

I have witnessed many struggles between the spider and its victims. Some insects, when ensnared, will fight as long as they can move a fiber. Others will yield as soon as they find themselves inextricably entangled. Perhaps their seeming acceptance of the situation is mere "playing possum;" but the play has a fatal termination, for a spider is not easily humbugged. Therein it differs from human beings. Nor does it humbug; therein it differs still more. To be sure, flies get into its web without seeing it or knowing what it is; but this is *their* ignorance or carelessness. The spider's web is a part of himself. He can not help it. He spreads a net, but only on his own grounds; if a fly treads on it, he commits a trespass, and is liable for "consequential damages."

The rumseller does not compel any one to

trespass on his premises. He displays his many-colored bottles in his own window, and adorns his own shop with glittering mirrors and fascinating pictures. His rum is his own property; he can sell it or let it alone, that is nobody's business. If persons *will* come there, and *will* drink his liquor, certainly they ought to pay for it; and they do. They ought to give money or life in exchange for rum. They generally give both.

When the honey-bee is caught in the spider's web he accepts the situation without a murmur. The fly struggles violently and rests quietly, alternately, until life is extinct. The wasp contends as long as any breath is in its body. The miller fights as long as it can move a muscle. But the bugs that frequent the window on a rainy day, and in the evening when there is a lighted candle, are the most obstinate insects extant. I have known a struggle between a big bug and a little spider prolonged for hours, the pentatomid breaking the ropes and clearing its limbs almost as fast as his arachnidian opponent could manufacture and adjust new ones. The spider always won in the end. He could manufacture his weapons of warfare as fast as he expended them, whereas the bug could only exhaust his strength and then die. I have known struggles between rumsellers and moderate drinkers prolonged for twenty years. Rumseller inevitably won unless a third party interfered. The drinker has just so much money to expend and then he is gone. The rumseller uses this very money to replenish his weapons of offense. The moderate drinker who trespasses on the domain of the rumseller has one advantage over the fly who intrudes on the spider's territory: his friends *may* come to his rescue. There are no *total absence* societies among insects.

The hero and heroine of my story were large spiders. Small spiders do not build houses. They may be descendants or antecedents (Darwin—Huxley) of the Jonadabs who lived in tents, and drank no wine, and had no delirium tremens. Small spiders live in the ropes, as Farragut fought (Page's picture). They extend their network a few inches in various directions, take a convenient position therein, never sitting nor standing, but always hanging or running, and watch for careless or credulous *Diptera*. In mental character they are singularly not unlike the numerous young gentlemen of Williamsburg and Jersey City "whose sands of life have nearly run out" (morally quite so), who ensconce themselves in hall-bedrooms or cheap attics and advertise

for consumptive customers. They catch those who do not understand

"Their ways that are dark, and tricks that are vain." Spiders catch no others.

The small spiders raise their young in the ropes. They construct a little circular sac-house, about the size of a pea (marrowfat), line the interior with a material softer than down, hang it in the network, deposit the primordial germs, and in due time a swarm of new spiders of microscopic dimensions may be seen running about the ropes. As I write half-a-dozen houses in different parts of an adjacent room are swarming in myriads. I reckon they may grow up to spiderhood, and become as dangerous to my domain as the "Heathen Chinese" may become to "Hail Columbia." All at once, during some night, these infantile spiders disappear. What becomes of them is one of the mysterious problems which Lord Dundreary says "no fellow can find out."

The spider, like other reasoning beings, always provides ways for retreating. There is not a braver insect on the earth when there is no danger. But it never attacks anything until it has become fastened. In this it manifests prudence, caution, discretion, all of which are mental qualities. I once held a lighted candle under the house in which embryo spiders were developing. In an instant the ever-watchful parent moved it along the ropes out of harm's way. Call this parental instinct if you will, but was there not forecast and strategy in so constructing the house that it could be moved away from danger?

I have assisted many insects to find their way into the spider's web to see what would happen. Flies and millers are caught indiscriminately by the feet or wings. Bees and wasps are lassoed around the neck or small of the back, or rather the slender connection (as we find in some ladies who lace tightly) between the thorax and abdomen, where the back should be.

The most satisfactory experiments were with the "grandfather greybeards." These uncouth creatures have a body about the size of a split-pea, mounted on eight legs, each twenty to thirty times the length of its body. Many times I have caught one of these insects by one of its longest legs and dropped it into the meshes of the spider's net. Of course its superabundant extremities would soon become badly entangled; but if left to itself it would generally work its way out. Its method was to struggle for a few minutes then rest a few hours, and so alternately. In one or two days,

unless the spider fancied a change of diet, it would escape.

This may seem like a cruel business; but no. Why? Listen: "The insect that eats other insects, by insects shall be eaten." This is the first of the entomological commandments; the other nine are repetitions of this. The analogous commandment to human beings was omitted from the Decalogue for want of room: "The man who cheats other men, by men shall be cheated." But as the theory is universally recognized in practice, its omission may not be important.

I had supposed that these innocent-looking long-legs were vegetarians, after the similitude of the antediluvians. But once upon a time, while investigating the dietary of spiders, I discovered one of these hypocritically-constructed carnivora devouring a miller. "That mercy I to others show," etc. I had him. Pursuing my researches in the direction of grandfather greybeards, I ascertained that they belonged indubitably to the multitudinous myriads of creatures who "live to eat" other creatures (no reflection intended on humans). They frequent shaded windows, unopened doors, the eaves of houses, barns, sheds, dark closets, obscure fences, and other places where unsuspecting millers most do congregate. I was enabled to demonstrate that g. g. was an insectivorous wretch, and hence appropriate food for spiders.

Spiders are not very fond of g. g.'s. They like bugs better, and flies are their favorites. [*Nota bene.* Is not everything useful to man? No good deed shall go unrewarded. Was not my benevolence in sharing my sanctum with a score of spiders compensated by the spiders eating up the flies, and thus keeping them out of my face?]

Spiders will condescend to eat g. g.'s when extremely hungry. But in most cases, when they see them struggling in their nets they will assist them to escape; and the way they assist them is a marvel of curiosity. It reminds me of the porters helping Mark Twain ("Innocents Abroad") up the pyramids; they nearly jerked him to death.

If a single leg of g. g. gets entangled, the spider instantly adjusts a rope and pulley and, in the twinkling of a comet, dislocates the member at its connection with the body. Here is chi-surgery extraordinary. Is there no reasoning in the case? If another leg is more easily pulled out than disentangled, out it comes—and another, and another. I have seen a dislegged g. g. go limping away minus

three legs on one side; with only one extremity on one side to counterpoise the four on the other side. I need hardly say its gait was not genteel. Indeed, it was almost as awkward as that of a young lady on stilted gaiters. Sometimes, when several legs were entangled simultaneously, the spider found it more convenient to relieve his fellow-insect by winding all his legs close around his body, cutting the web below, and letting it all drop out together. To wind up a g. g. in this manner required from one to two hours' incessant labor. But the spider has one virtue—when it has anything to do, it does it.

Do such expedients, such planning, such contrivances, such wonderful adaptation of means to ends, and such marvelous ingenuity of management indicate nothing but blind propensity? Possibly the reader may apprehend that the author only tried long-legs on a single spider. Not so; he experimented with scores of g. g.'s, and on spiders of high and low degree—those who dwell in tents and those who live in houses. The result was the same in all cases. Every spider contrived in an instant some way to extricate the unfortunate g. g. or to eat it. If its education was not perfect, its instinct was certainly marvelous.

In an adjoining room a huge mottle-hued arachnidean had constructed (Constructiveness is "semi-intellectual"—Gall, Spurzheim, Combe, Fowlers, Wells, *et al*) a domicile something in the shape of an old-fashioned Dutch oven, or a modern pannier *a posteriori*, or a bonnet in the days of the "Old Folks," or a latest fashion sesquipedalian *en train* (see *Bazaar*), which it had extended (beginning in the corner of the window), by means of a network of webbing, to an adjacent barrel filled with effete medical journals (value four cents a pound), containing notions as absurd as the shape of a g. g. and iterating dogmas as dark as the bugs of Africa (order, *Hemiptera*, mouth, *Mandibulate*), thence along the top of said barrel to the projecting end of a New York *Medical Gazette* (not now published) thence along the other side of said barrel of said medical journals to *Braithwaite's Retrospect* (still alive—it don't take its own medicine), thence along the common atmosphere to the corner of the window above-mentioned and described, containing one hundred square inches of spider's web, be the same more or less.

For a spider this domain was fully the equivalent of the man's farm in California of 170,000 acres. Demonstration: 25,000 webs make one

acre; 25,000 times 170,000 are 4,555,000. Ergo, 4,555,000 spiders equal the bulk of a man.

In order to test the rationality of the particular spider we are now discussing, I made a rent in the web three inches in diameter. The next morning it was repaired. I repeated the tearing; it repeated the repairing. Every evening I reiterated the depredation; every morning it had effected a perfect restoration. Its perseverance was indomitable; Chicago is not more enterprising. Finally I extended the tearing in several directions; finally it repaired the whole, and doubly strengthened the parts with extra cross-ties in all directions. Perseverance won; I retired discomfited. A young man in Missouri took strychnine a few days ago and died, because he did not succeed in his first attempt to be somebody. What a pity he had not been born a spider!

Instinct does not play fantastic tricks; it laughs not, nor does it cry. The lamb may skip, the colt may caper, the calf may run, the pig may trot, the child may smash things; these may be instinctive efforts to develop the muscles, but they are wholly self-relative. There is no cunning, no calculation, no planning good nor plotting mischief concerning others. Instinct may kill and eat for the benefit of number one, but it never makes fun for the sake of sport. Moreover, it is invariably honest. Fraud and deception are characteristic of reasoning creatures, of which human beings are the most notorious examples.

A very large miller seated itself on a pane of glass some six inches below the tenement of a very small spider. The miller was evidently too big for the little spider to lasso successfully; so it resolved on a little fun. Taking a circuitous route it approached the miller netherward, and fastened a thread to the tip of one wing so dextrously that the miller was not disturbed in the least. Then returning to its normal position it gave the thread a few gentle jerks. The miller found himself in a "fix," and a more astonished and mortified creature can hardly be imagined. Starting off with all its might, it exerted the free wing with superhuman energy, which caused it to circumgyrate. Round and round, faster and faster, went the aggravated insect, until, finally, as its circle enlarged, it was enabled to touch the glass with its feet, when, giving an extraordinary spring, the thread broke and miller was himself again. Who can imagine that the little spider did not cachinnate heartily at big miller's performance? If the spider did not enjoy the scene, why did it continue it?

A medium-sized spider and a bug of ordinary dimensions had struggled for two mortal hours in one corner of my room. I began to think it was my duty to interfere in the interest of *insectanity*; but I gave them one hour more to settle the controversy. If one did not kill the other, nor the other get away from one in that time, or demonstrate sufficient ability to do so, I promised intervention. Until then I would observe neutrality, according to the law of nations. It was a sort of Spain and Cuba affair. The hour expired; no progress was made. Such a contest without result is simply barbarous. I placed both parties in durance within a glass tumbler, covered it with a copy of the *Science of Health* (opportunately received, thanks to the publisher), and left them to meditate on the horrors of war or negotiate a peace, in a situation

"Where heavenly pensive contemplation dwells,
And ever-musing melancholy reigns,"

or ought to. In this situation perhaps the spider may eat the bug; but something very different from instinct will be necessary to enable the spider to capture and devour the bug in its ordinary manner.

He did it nevertheless. The next morning's dawn discovered the poor bug suspended in the center of the tumbler, cold, stiff, dead. The inexhaustible wit or wisdom (is either instinct?) of the spider had managed to spin a web, with which it spanned the tumbler in all directions. Like Crusoe on the island, or Sinbad on the whale's back, it had adapted itself to its altered circumstances, and made itself as comfortable as possible. What better can the wittiest or wisest man or woman that lives do? I pause for a reply.

THOMAS STERRY HUNT, F.R.S.

IS Phrenology true? Is it a fact that the shape of one's head has anything to do with the condition of his mind? Can it be established that one who devotes himself to the study of science will, in time, acquire a peculiar conformation of brain corresponding with such study? All these questions may be answered in the affirmative. A philosopher looks like a philosopher, and a fool looks like nothing more. Boxers, butchers, and gladiators do not look like preachers or schoolmasters. Nor do thieves, robbers, and murderers look like honest men. The bare statement is sufficient to secure assent from all who observe and think. Phrenology confirms, on scientific principles, the general impression, "A man may be known by his looks."

Herewith we present the likeness of a person who has devoted all his life—so to speak—to a close, careful study and analysis of scientific problems. These studies called into vigorous action certain faculties, which faculties became enlarged by virtue of more blood being sent to the parts or organs most used. Observe, for example, the form of those features. See how prominent the part

of the forehead just over the eyes! Phrenologists call them the Perceptive faculties, and their peculiar function is to observe, investigate, look into new subjects; in short, they inspire curiosity, and incline one to say, "Let me see!" "Let me see!" Out of this state of mind comes scientific investigation, love for travel, and induces one to go out—Agassiz like—on scientific explorations. Mr. Hunt not only has the brain but the character of this kind of men. His head is also high, long, and broad. There is great volume of brain, closely packed, and it is of good texture and quality. See how high from the root of the nose to the top. Observe, also, how full and prominent the eye. It is easy for him both to acquire and to impart knowledge. He has a "knowing look," and he is a sort of "walking encyclopedia." He is, withal, kindly, generous, charitable. See how very prominent the brain at Benevolence! "Yes, but has he *no* faults?" interrogates the objector. Yes, he is human, and not infallible. He would be impatient with a stupid skeptic, who would attempt to offset ignorance against knowledge. He would demand all his rights. He is aspiring, ener-

getic, full of enterprise, pluck, and push. If one imposes obstacles in the way of his progress, he will be hustled off the track, or he will be run over. He *may* have a perverted appetite, and indulge in substances which are neither food nor drink. Are not these faults? But we are not now searching

education in his native town, he afterward read with a view to entering the medical profession; but having a stronger liking for chemistry, he became, in 1845, a private student with the present Prof. Silliman, spending two years in the laboratory of Yale College, where he was also assistant to the late Dr. Benjamin Silliman. In 1847 he was



for imperfections. We place him before our readers as an evidence of the truth of Phrenology, and also as an illustration of what perseverance and industry may accomplish.

THOMAS STERRY HUNT, whose reputation as a chemist, mineralogist, and geologist, extends beyond the bounds of this country, was born in Norwich, Connecticut, September 5th, 1826. Having received a common-school

appointed chemist and mineralogist to the geological survey of Canada, then just commenced, under the direction of Sir William Logan, a post which he held over twenty-five years, resigning it not long since to accept the chair of geology at Boston in the Massachusetts Institute of Technology, left vacant by the resignation of Prof. William B. Rogers, the founder and former president of the Institute.

The earlier studies of Mr. Hunt were specially directed to theoretical chemistry, in which he has appeared as the reviewer and critic of Liebig, Dumas, Laurent, and Gerhardt, developing at the same time a system of his own, in which he deduced all chemical compounds from types represented by one or more molecules of water or of hydrogen. These views, maintained by him alone from 1848 to 1854, in successive papers in the *American Journal of Science* (Silliman's Journal), were at length adopted by the leading chemists of Europe, and are now recognized as the basis of modern chemical theory.

In further studies he has endeavored to develop a philosophy of the sciences based generally on the views of Hegel rather than on those of Comte. He rejects the atomic hypothesis, asserts that solution is chemical union, and chemical union itself identification. His researches on the so-called atomic volumes of liquids and solids, and his views of mineral polymerism, have opened a field of study as yet almost unexplored.

His most important labors have, perhaps, been in chemical geology and mineralogy. Besides a large number of special memoirs, his "Contributions to the Chemistry of Natural Waters" (1865), and his "Contributions to Lithology" (1864), are to be particularly noticed; and also those on the "Chemistry of Gypsums and Magnesian Limestones" (1859-1866). His contributions to a knowledge of the origin of crystalline rocks, extending over many years, are summed up in an address given by him as retiring president of the American Association for the Advancement of Science, at Indianapolis, in August, 1871, and continued in the *American Journal of Science* for 1872, in a discussion with Prof. Dana. We may also notice his views of cosmogony, which embrace a discussion of the chemical and physical laws which have presided over the formation of the globe from its supposed nebulous condition; the origin of earth, sea, and air; the generation of all rocks; the origin of metaliferous deposits; the theory of volcanos and earthquakes; and an explanation of those and of the movements of the earth's surface, consistent with the view maintained by him

of a solid instead of a liquid interior of our planet. His views on these subjects have been put forth in various scientific journals and in courses of lectures before the Smithsonian Institution, Washington (1860), the Lowell Institute, Boston (1866-67), and the Royal Institution of Great Britain (1867). They are embodied in an essay in the "Report of the Smithsonian Institution for 1869;" and their publication in a systematic work on "The Chemistry of the Earth" is announced by a London house.

Mr. Hunt's recent studies on the geology of Eastern North America have attracted considerable attention, and will be found summed up in part in his Indianapolis address, already referred to, and in part in his more recently published essay on "The History of the Names Cambrian and Silurian in Geology." His contributions to the chemistry and geology of petroleum and of salt-wells, and to the manufacture of iron and steel, and the metallurgy of copper, are also well known.

The scientific papers published by Mr. Hunt in the *American Journal of Science* during the last twenty-seven years are more than one hundred in number, besides which are numerous articles communicated to the scientific journals of France and England. He has, moreover, contributed largely to the reports of his geological survey, and to the "Geology of Canada" (1863). The latter half is from his pen. He is the author of "A Summary of Organic Chemistry," forming a part of Prof. Silliman's "First Principles of Chemistry" (1852). Mr. Hunt was a member of the International Jury at the Paris Exhibitions of 1855 and 1867. He received in 1854 the honorary degree of M.A. from Harvard, and has the degrees of LL.D. and Sc.D. from the Universities of Montreal and Quebec, in the faculties of both of which he has long been a professor; and in the latter for many years gave courses of lectures on geology in the French language. He holds the rank of officer in the French order of the Legion of Honor; is a member of the American Academy, of the American Philosophical Society, and of various other learned societies, among which are the Geological Societies of France, of Dublin, and Vienna, the Imperial Leopoldo-Carolinian

Academy of Germany (1857), and the Royal Society of London (1859). Like many distinguished scientists, he is unmarried.

In our December number will be published

an address which was given by Dr. Hunt before the Polytechnic Association of the American Institute, in New York, on the 24th of May last.

ROCKY MOUNTAIN ECHOES.—No. 5.

BY WILLIAM H. PABOR.

COLORADO SPRINGS—A COMMEMORATIVE ODE.*

There were murmurs down the valley, there were echoes
from the hills,
There were whispers through the cañons, while the ripple
of the rills
Was a token of commotion, from the mountain crowned
with snow
To the valley in the glory of its emerald bloom below;
In the moonlight, in the sunlight, in the starlight, in the
dark,
From the cañon of the Chiann to the Monumental Park
There were signs and there were symbols in the air and
on the ground,
That the silence of the ages had been broken—and that
sound,
Like a tidal wave advancing where a wave had never
swept,
Had washed up to light and action powers and strength
that long had slept.
Year by year the flowers had opened to the sunshine and
the breeze;
Year by year the larks had caroled in the shadow of the
trees;
Year by year the mountain's bosom yielded up its snow
with tears,
Till they rippled down the river, like a tide of hopes and
fears,
Waiting for the steps that lingered, waiting for the hand
that stayed,
Waiting for the mighty master over river, glen and glade.
In the record of the ages, written on the rocks' red page,
There were hints and faint suggestions of a grand majestic
age
When the very gods were sentient, and their temples, all
sublime,
Lifted pinnacles of glory to the suns of former time;
When the Naiads and the Dryads and the children of the
sun [run,
Met the fairies of the meadow where the magic waters
And along the shining river and across the emerald plain
There were dances in the moonlight that can never come
again;
For the fairy days are over, and the solitude has fled,
And the throbbing of a nation's heart makes echoes here
instead;
And the valleys and the foot-hills and the pine-clad
mountain side
Answer back the magic whistle coming over the Divide,
As the Little Giant engine, running down the narrow
gauge,
Sounds the trumpet notes of triumph to the genius of
the age.
Science speaks, and men of wisdom, shaking off the
sluggish old,
Slip to fresher grooves of action, and the timid grow
more bold;

And our human natures broaden, and our thoughts take
higher flight
In the widening realm of motion and the struggle for
the right;
And, behold! the people follow, and where once the In-
dian trod,
The school-house leads to knowledge and the temple
leads to God.
And the little children gather round the hearthstone,
bright and new,
While the father tells the story, strange as fairy tale, yet
true,
Of the land once called a desert, given over to the beast,
But where nature's fruitful bosom yields to one and all a
feast;
Of the savage clans in conflict, in war's wild alarm met,
How the air was rent with clamor, how the sod with
blood was wet;
How from passes through the mountains, from the rocks
whose stately forms
Have withstood the test of ages and their elemental
storms,
Came the Cheyenne and Apache, meeting their Co-
manche foe,
Where the Monument and Fountain met and mingled
tides below.
But yet not alone of warfare; for upon the speaker's
tongue
Words of romance, too, would linger, worthier to be said
or sung
Than such deeds of Indian conflict, for such fairy tales
of time,
Echoes of enchanted ages, are the food for minstrel's
rhyme;
How came brave old Ponce de Leon, journeying from a
Southern sun,
Seeking founts of sparkling water where immortal youth
was won;
From Floridian Everglades, passing to the Aztec's land,
Through the Halls of Montezuma, seeking for some
guiding hand,
Up the fringes of the mountains till the Southern Cross
went down,
And the clear, cool starlight gave him vision of the
Northern Crown;
Past the Spanish Peaks below us, till he stood, ah! who
shall say
That his feet touched not our "Fountain" as he passed
upon his way?
That he tasted not the waters of the magic Manitou,
And, immortal through the tasting, lingers where its
waters flow?
Is it all an idle fancy? Look around and see the spell
Woven in these later ages, and the wonder-tales they
tell;

* Written for the first annual anniversary of the founding of the town, July 31st, 1873.

Dusky brave and brown Hidalgo, these have lived and passed away,
 And a nobler grade of nature shapes the story of to-day.
 Here are homes and here are hearthstones where but little time ago
 Silence brooded over nature in her desolating woe;
 Charm of children, voice of women, face of man,—these were not here
 When the green grass and wild blossoms crowned the summer of last year;
 But, behold, a mighty master beckoned to the Promised Land,
 And one rolling annual cycle shows the record of his hand;
 Fair flowers bloom round open doorways, and above the fields of green

The lares and penates of the new home crown the scene,
 And a stately city rises in the consciousness of power,
 And the land, no longer desolate, grows fairer every hour.

Sweet home of ours beneath the hills—the mountains guard our doors,
 And blessings from a Father's hand drop down upon our floors.
 We missed the old hearthstone at first, but round about the new
 We gather with a pride as strong and with a love as true;
 Health, wealth, and happiness abide beneath the brooding wings
 Of nature's sanitarium at COLORADO SPRINGS.

PETER CARTWRIGHT.

THE recent death of this eminent pioneer of Methodism in the West has awakened the attention of religious people, and we can not omit some notice of his remarkable career.

Born in Amherst County, Virginia, September 1, 1785, he entered the ministry of the Methodist Church, as an exhorter, at the early age of seventeen, and soon distinguished himself for zeal and activity in his chosen calling. He made the West, as it was fifty or sixty years ago, the field of his missionary operations, and ever one of the foremost to do and endure, his name early became a "household word" in Western homes.

He was famous for his camp-meetings, his religious zeal, his native eloquence, his quaint anecdotes, his physical strength and prowess, and for a thousand pleasant eccentricities. Up to the time of his death, at his home, near Pleasant Plains, Sangamon Co., Ill., he had been engaged in his varied Christian work for about seventy years.

A published "Life of Peter Cartwright," an autobiography, is very popular, and is, in many respects, a record of incidents and adventures in his pioneer ministry.

He had a large head, well set on a compact body, with an organization and temperament indicating vigorous recuperative and enduring

qualities. He was "hard to kill," a fact well evidenced by the numerous dangers and exposures which he braved. He was not brilliant in mental endowment, but possessed of that sterling good sense, aided by a large practical experience, which commands respect wherever it is evinced.



CIRCUMSTANCES.

MAKE circumstances your servants instead of your masters. They are sure to be one or the other, according to your own strength of purpose. If they do not serve you in the way you want them to, it will do no good to grumble at them, but set yourself in readiness to accept their service in another way. Some of us appear to live upon the principle, "If I can't get what I want out of a man, or out of a certain arrangement of my plans, I'll not have anything."

If we adopt this as a rule, either avowedly or unwittingly, we lose full one-third of the benefits of our life's discipline at the start, to say nothing of what it may lead us to in the future. For who of us ever succeeds in every venture or undertaking? Who of us has not been disappointed where it seemed that our wise and careful planning must have secured the result? If, then, these disappointments

and miscalculations are inevitable, it would seem that the shaping of our lives lies entirely out of our own power—subject to circumstances. Yet the case is exactly the reverse of this. We are all “free agents,” and hold not only the power to mold our own characters, but also, in part, unavoidably those of others. It depends solely upon what we place our hopes of happiness and advancement, whether it be within or without of ourselves—subject to the will of God or that of man.

Nothing was ever made, nothing ever happened, without a use in it. These intricate happenings, that wind themselves in and out of our daily lives, get us wonderfully entangled, each with the other, sometimes so that they serve not only *the* man who recognizes them, but any and every one who chooses to profit by their quiet and timely suggestions. The honored, but time-worn, Mr. Micawber, who “waited for something to turn up,” was of an unusually placid, cheerful, and improvident disposition. We would hardly advise that method of accepting circumstances. Still, if he really could not bestir himself and take circumstances “by the forelock” with any greater avidity, it was certainly a grateful coincidence that he could be happy under it and not make himself and his devoted wife more miserable by incessant grumbling at fate. Circumstances and “fate” are about the same thing after all. Our fate is quite likely to be what we make it.

Some of us feel as if there were an opposing fate stationed at every chance corner of our lives; and as we allow ourselves to be disturbed by them, they rapidly increase, until there is some petty drawback to the simplest daily occurrences. “Every rose has its thorn,” and they insist on grasping it, thorn foremost, instead of making the best of the inevitable, and pleasantly avoiding contact with its sharpness. They can not even eat a plum or a cherry without wishing it had no stone!

One man thinks if such and such things were out of his way he could get on as fast as any one, and become rich and influential. But he has many to provide for, in or outside of his family, or his physical or mental capacities are limited, and he is obliged to stand back to let others pass. Another man laments his ungovernable temper, or his tendency to intemperance, as a bitter obstacle in his spiritual journey. If only he could be rid of this he might become a worthy Christian man.

Ah, yes! *If* there were nothing against us we must be very stupid not to progress rapidly. It is always easier going with the current than

against it; and yet the stronger the current, the more downward its tendency. He who has had the most to contend against is often he who holds the highest position in fortune or influence. He did not allow circumstances to cramp and belittle him. He climbed above them and gained strength in the effort.

Our self-made men and women, whether the position they occupy be one of public honor or of private usefulness, are not only the bravest, strongest, and truest, but they are also the most tender and helpful. Only till we have been through, and suffered from, the drawbacks and disappointments of a struggle to make our own place in life, can we thoroughly sympathize with, and widely assist, those who are following in our paths. It is a notable fact, too, that those whose efforts have been directed mainly toward this world's riches and honor, and their success is secure, are seldom so ready to assist the young aspirant behind them as they who have taken a nobler aim to their hearts.

If our aim be a selfish one we are not so willing to share its enjoyment with our fellows. We can be thankful, however, that He who judges us does not estimate our merit only by results, but in the depth of His love every obstacle we have overcome, every burden bravely borne, every sin we have trampled down, will weigh heavily in the balance to our favor. And many a poor, weary soul, whose life has been despised, will stand higher in the hereafter than others who are looked upon by the world as far nobler.

As we grow to be men and women, and our characters gradually take form and fullness within us, we instinctively have a leading impulse for some particular condition of outward or inward life. The stronger the character the more engrossing the desires. There are few characters so weak that they have no aspiration toward wealth, goodness, or fame. In many lives it amounts to nothing but wishing; yet even that inefficient wishing has its power to shape and give color to the life and character.

Some little waves of everyday feeling are made better or worse according as the tendency of the wish is to lower or ennoble. The stronger the character, then, the greater the necessity that the aim should be high; for whatever this ruling desire be, it will gain a subtle power over the whole tone of our lives, an influence which we may little suspect. Every circumstance will be molded into a suitable shape for our structure of life.

The need, then, of our aim being high lies

not only in the hope of our own advancement, but in the fact that it is quite impossible for any person to live in daily contact with others and exercise absolutely no influence over their lives and characters, either for good or evil. This we are too apt to overlook. It imposes a responsibility upon us from which we are never free. Some would shirk it by reasoning that it is preposterous and vain to deem ourselves of so much importance to others. This influence does not always lie in any direct individuality of our own, but often from an in-born tendency in our neighbor, as well as ourselves, to lean upon and derive motive or purpose from another.

Many there are who bear what they can not avert with a sweet patience and spiritual fortitude which hallow their lives to those around them. Some there are of an easy-going temperament, taking life as it comes, without any apparent effort in any direction, accepting whatever happens, and making the best of it, with an easy good humor that is quite impossible to others.

He whose character is strongly marked, whose will is unbending, and who is fearless of obstacles, will be very sure to gain his end in life, whether it be for worldly wealth and power or for a high standard of uprightness and loving-kindness.

THE PLANETS: THEIR LIFE AND DEATH.

[The article on Comets, published recently, has drawn the attention of several writers who are interested in astronomical research. Some of the articles we shall take the liberty to offer in this department.]

IN our search after truth, when we find that the assumption of a theory, or a class of theories, produces no discord, but, on the contrary, a harmony of conclusions, we adopt such theory, or class of theories, as true. In this discussion we will assume three propositions, and from them endeavor to deduce a consistent result.

First. That our sun is in a state of active combustion, resulting in the continued phenomena of light and heat, and the occasional phenomenon of the birth of a new planet.

Second. That each planet is enlarging its orbit, or that centrifugal force is greater than centripetal.

Third. That as the planets recede from the sun cohesive attraction decreases, and rarity of matter increases.

If our first proposition be true, then the mighty furnace must be supplied with fuel, or having consumed itself, combustion would cease, light and heat would no more be emitted. From whence, then, comes this supply? To a casual observer there will appear several meteors during an evening walk; by a careful watcher, well supplied with the best means for observation, several hundred will be seen in the course of a single night.

We may therefore safely say, that many thousand meteors pass into our atmosphere daily. The light emitted by meteors in their passage through the atmosphere often exceeds that of the brightest star. At times many millions of meteors fall into our atmosphere, are consumed, and disappear. In a few in-

stances the fall has been so great, that it is said deposits of ashes could be traced on the leaves and waters. The phenomena of meteors have been attributed to small particles of disorganized matter, coming within the sphere of the earth's attraction, causing them to fall toward it with such great velocity as to condense the atmosphere before them so much as to produce combustion.

Therefore if so small a body of matter as the earth attracts so many thousand meteors daily, the sun, so vastly superior in size, must draw many million times the number to himself, besides vast numbers of meteorites, which are larger bodies of solid matter having no apparent regular motion or position in the universe. Now, the sun being in a molten condition, and regularly receiving additions to its mass in this way, would ultimately gather a greater quantity of matter than could remain together and maintain its regular velocity around its axis; the tendency would be to accumulate at the equator, and when the amount became so great that the velocity would overcome the centripetal force, a mass would be detached, which, being liquid, would naturally assume a spherical form, and continue to move around the same center upon an axis of its own. The centrifugal force exceeding the centripetal would continue to increase the distance, until in myriads of ages, and numerous repetitions of the same phenomenon, all the planets would be produced. If at any time there should be a greater amount of matter thrown off than could revolve at a given rate around its axis, then from it would be detached a portion which would become a satellite or ring to the greater mass; thus the larger planets have

several satellites; the smaller, one or none. In the case of the asteroids it may be presumed that the mass of matter instead of cohering into one mass, separated into many little globes, subject, however, (with one exception) to the same laws of motion as those which collected into larger bodies.

In the case of Saturn, it may be presumed that after throwing off her satellites, and becoming somewhat cooled, there yet remained a surplus of matter, which collected around her equator, and, becoming detached, yet not broken, formed her beautiful rings. A fact worth noting, as going to establish our second proposition, is, that as we pass from the sun the distance between the planets increases in a regular ratio, and the distance of the satellites from their respective planets likewise increases as we count from the sun. In the vegetable and animal world, organization springs into life, develops, grows old, and dies; while new forms and new organisms are continually arising from their elements. So far as we can judge, similar laws control the planetary world. Mercury, youngest of the family, is not yet sufficiently cooled, it is said, to have a solid crust; Venus, yet in the volcanic period, is just beginning to be suited to vegetable and animal life; the Earth, just in the midst of animal development, yet even now begins to fail those gigantic races which formerly roamed over her hills and plains, and the day of intelligence of the higher order is fully dawned. Beyond us Mars and Jupiter may present the highest order of intellectual development; while yet beyond, under the magnificent skies of Saturn, where physical life can not exist, perchance the spirits dwell; while on the outer border Uranus and gaseous Neptune remind us of hoary age waiting to be dissolved, that younger and more beautiful forms may spring from their elements.

If our propositions be true, our planets are moving on toward disorganization or to the point where, falling without the sphere of the sun's attraction, and being reduced to a gaseous state, they will cease to revolve as planets; becoming, perhaps, comets or wandering nebulae, scattering their atoms through space, as seeds are scattered by the winds, where they await the moment when they again come within the sphere of attraction of our sun, or some other sun, again to be drawn to it, mingled with its mass, and cast forth in new combinations; forever fulfilling the will of the Great Architect of the universe, forever changing, yet indestructible as the infinitude which called them into existence.

J. M. HODSON.

LAST WORDS!

IT is not a political election of which we would speak, but of an "election" or choice of a pursuit, which may be of more importance to the reader than whether General Grant shall be re-elected, or his opponent be intrusted with the honor and influence of the highest position on earth.

To be able to teach man how to carry his complicated mental nature—how to educate his faculties so as to secure the highest possible mental power, to regulate his passion so as to find the path of virtue pleasant; and so to employ his forces as to secure the highest degree of attainable success in life, is a position which presidential candidates might covet. Yet Phrenology, as a profession or a practical pursuit, opens to an earnest benefactor a field wide, rich, pleasant, and full of good fruit. Who would not covet such a position? Not that it is more remunerative pecuniarily to the worker than are some other vocations, but the opportunity for doing good to the people, old and young, in teaching them how to nourish the body so as to obtain the highest order of health and happiness—how to be temperate in all things—how to educate the young in every faculty and passion so as to secure the best manhood in its largest sense, and how to select for each person the pursuit for which, all things considered, nature has endowed him; this, indeed, is a place of influence, a position which confers honor and imposes a noble responsibility.

The parish of the true phrenologist is not limited. His constituents encircle the earth, and there is a "Macedonia" for him in every province and on every shore. We wish to instruct and send forth many able and successful expounders of this man-reforming science, who can so serve the public as to be sought after and welcomed in every city and village of our broad land.

Our next Annual Class in Practical Phrenology will commence on Wednesday, November 13th. It is desirable that all who propose to become members should be present at the opening. Those desiring particulars may inclose stamp, and ask for a circular entitled "Professional Instruction in Practical Phrenology." Address, "Office of the PHRENOLOGICAL JOURNAL, 389 Broadway, New York."

WOMAN AS AN INVENTOR.—An English writer, says the *Worcester Spy*, in discussing the woman question, finds a solution of the

query, Why women do not invent, in the laws of hereditary influence. Women, he says, have always been drudges; men have been the explorers, the innovators, the actors of the world from the first, while women have simply looked on, followed, and obeyed. Therefore they have inherited an uninventive constitution, and the incapacity of unnumbered generations has descended upon the women of to-day. "All of which," says a New York paper, "is exceedingly plausible, provided the fact corresponds

with the assumption." If our contemporary finds it plausible, its capacity for being misled by the semblance of an argument is truly wonderful. Are not women their fathers' daughters, and men sons of their mothers?"

Women invented hospitals and Sunday-schools; Elizabeth Heyrick, a woman, invented "Immediate Emancipation," as the cure for slavery. These facts speak volumes, and are a sufficient answer to all objections.—*Woman's Journal*.

PROTOPLASM AND EXTRA PHILOSOPHY.

PROFESSOR HAECKEL, in "Nature," for March 2d, 1871, page 355, is quoted as affirming "that creation—that is, by supernatural means, through a mysterious creative force, existing externally to the bodies—to every philosophic naturalist must appear as untenable as is every assumption of a creation. On the other hand, the assumption of an archigenesis (that is, spontaneous life from non-living matter) for the first living beings, from which all others have been developed, is a logical postulate of the human intelligence."

I think such extreme materialistic views are not participated in by the foremost naturalists and investigators of the day.

Can Prof. Haeckel for a moment assume that blind, unthinking matter is capable of combining to transcend itself, in producing that which is infinitely superior to its unthinking, blind elements and action, in chemically producing mental powers for finite bodily organizations? Always bearing in mind that "Prof. Haeckel determines this life-giving property—protoplasm—to be exclusively carbon, oxygen, hydrogen, and nitrogen, to which, though not always, is sometimes added sulphur." Such a dogma, carried to its logical sequence, is impossible for a moment's admission.

Such a postulate *compels* the anomaly of a supernatural accomplishment, by originating something that the combining materials do not of themselves possess; something foreign, *i. e.*, outside of their constituent elements, having been supernaturally imbibed. The elements which he finds in analyzing protoplasm are no proof that they do not contain a subtle something which escapes the analyzing powers of chemistry, any more than that the diamond is wholly of carbon because chemistry finds no other element; or that charcoal, which is carbon also, is diamond—the one requiring the incorporating effects of caloric, and the

other those of electricity for its production; neither of which leaves tangible expression for the chemist as to the nature of its entire formulative origin. So the blind, material action of five elements, which he claims to be all-sufficient to account for the world of adapted matter and intelligent participation, is a gratuitous, unphilosophical dogma, wholly insufficient without an intelligent impress, external to the objects.

The more we investigate the origin of bodily organization, the more mysterious we find its association with mind as constituting the life of the organism. It is apparent that there is, besides the materials of physical organism, an active principle, an all-important force of motion, which can not be a quality of inert matter; protoplasmic matter continues inert until its parts are individualized by life—that is, by something *foreign* to itself; the fitting of which, again, leaves that matter dead, inert, and whose departure or presence no chemical analysis can detect in immediate change of elements. Such life is a self-evident force, in itself and of itself, as a cause of action, and is the most important force in creation as embodying intelligent appreciation and use of inert matter. Now, as there is no known force which does not necessitate a preceding force to account for its action, so we trace force back of force until we are lost in the chain of causes, and there can be no propriety in denying a primal, intelligent, grand, first cause of all after forces, because in detecting some we can not assume to have found all—the *all* not coming within the province of the finite in any department of inquiry.

As mind-force can not be claimed as synonymous with, or a part of, the materials of the bodily organization, since that is intact on instant death, such mind-force may be indisputably claimed to be that separately infused su-

pernatural element which alone is made to associate and thus give life to the body, whose organization is designed for the mind's convenience, as its only source of connection with surrounding organic and inorganic materials; hence the marvelous adaptation in organisms which none other than a superior, supernatural, intelligent power or force could be capable of designing and executing; which, certainly, blind, aimless matter could not be conceived to originate.

Under the action of nature's laws man, by his will-force, can give direction to matter, both of his body and external materials, to the end of forming compounds and moving vast masses, etc., and thus while finite, limited will-force is capable of such accomplishments, is it not conceivable, even a necessary conclusion, that the primal, first cause of all after forces is an infinite, unlimited will-force, being fully capable of giving laws—tendency—for a purpose, to all matter, by which it is limited in reciprocal action, and so becomes the created? The power to originate the organic and inorganic is Creative Power; and when done for a purpose, everywhere evident in adaptation, is Creative Wisdom; and when the same embraces happy results for the organic, is Creative Goodness. As the primal force, which controls all other forces, is known to accomplish such beneficent purposes, intelligence is necessarily involved in their design and execution.

Electricity, in its dual capacity of attraction and repulsion, is capable of combining and disintegrating—making and unmaking,—but in itself can not act with a purpose, but must blindly obey some more primal impulse or control, and thus may become that primal's main agent for execution of all that exists. As we use electricity voluntarily, as well as involuntarily, with marvelous results, why may not the primal force use it for infinite, intelligent purposes with infinitely greater results?

As we may not know the all-controlling, primal force in nature, we might as well admit it to be an adequate, infinite, intelligent will-force, as none other can accomplish the results we see, as matter can not combine to produce what it has not, and so intelligent direction is not only admissible, but a necessity; therefore, a supernatural (*i. e.*, beyond our knowledge of natural laws) will-force for infinite purposes are the only alternative philosophical conclusions, as the only fundamental basis or primal cause of all that we do know and aspire to attain.

In conclusion: it seems apparent that every

thing is undoubtedly evolved from the action of natural laws—that is, laws or forces impressed upon matter for its governance by a primal, original impulse. This primal force is here claimed, for obvious reasons named, to be an infallibly grand, intelligent will-force, as the only supernatural power capable of impressing characteristics for a purpose upon matter, which it is impossible to analyze, but which imparted life to original organisms, from which all subsequent life may have been generated, by parentage or inherited subdivision, through infused living cell globules.

Mind being unlimitedly impressible, yields to experience through the bodily action of the senses, and thus is evolved, through mental reasoning, all our deductive knowledge.

Mind, too, receives its quality of impressibility largely through inheritance, so that we influence the characters of our posterity, and hence the great necessity of our own cultivation.

CHAS. E. TOWNSEND.

JOSEPHUS AND GENESIS.

IN the discussions of the origin of our race, none of our learned writers have referred to the views of this distinguished Hebrew. He says (Against Apion):

"For we have not an innumerable number of books among us, but only twenty-two books. And of these five belong to Moses, which contain *his laws*, and the *traditions of the origin of mankind*."

Josephus, a high-priest of the Jews, one of the most learned men of the most enlightened time among the Jews, a devoted patriot and most zealous adherent to the Jewish faith, thus speaks of the account of creation as given by Moses. Why, then, should we, of another faith, and nearly two thousand years later—we who reject almost entirely every law of Moses—hold in such awful veneration these "traditions of the origin of mankind," so that, whenever any discovery in science is made, we either reject it, or stultify ourselves by giving labored and unnatural construction to the language of Genesis, in order to conform it to the facts? Will the author of "The True Meaning of Adam," published in your last March number, please to explain why one should so venerate these mere traditions, while he may pay no regard to the laws of Moses, given in the same books, as coming direct from God, in conversations with Him, and whom Moses saw face to face?

C. I.

THE SPHERE AND FUTURE OF THE PHRENOLOGICAL JOURNAL.

WHENCE do we come? What are we? What is mind? What is this body which we boast? How is part related to part? What is the connection between mind and body? How do we think, act, and feel? Are we mortal or are we immortal? In what do we differ from the brute? What is Spirit? Whence comes it, and what is its function? Shall we dwell in a different sphere after death? If so, what are the evidences? How should we live to best fulfill our destiny, whatever it may be? How may we reclaim the fallen? How treat the insane and the criminal? What is the object of education? What are the best methods for developing body and mind? How can we make the most of ourselves? These are some of the questions which the PHRENOLOGICAL JOURNAL discusses candidly, and seeks to answer. Its sphere being

MAN—HUMAN NATURE,

there is room enough for variety of interest and absorbing study. Does the reading public demand sensations? They can find them here. The strange, the wonderful, the startling meet the eye of the student at every turn. Well could Hamlet admonish his friend:

"There are more things in heaven and earth, Horatio, than were ever dreamed of by your philosophy."

Fiction is surpassed by Reality. Imagination is confounded by the evolutions of truth. The startling developments now and then announced by the physicist declare to the novelist, "Your occupation's gone—to astonish, you can do no more in the future than amuse."

It is thirty-four years since the PHRENOLOGICAL JOURNAL was started by men who were deeply impressed with the importance and scope of the study of man and his relations. As the years have passed the work has grown upon their hands, and general interest being awakened, a very large share of the scientific research of the day is devoted to Anthropology.

From whatever source—whether revelation, or geology or ethnology, or history—light may be obtained, it is garnered carefully and offered to our readers. The most recent achievements in medical science, chemistry, and surgery are presented on the pages of the PHRENOLOGICAL JOURNAL for the information of the world, irrespective of the damage done to old theories and personal prejudices. Thus ANATOMY, PHYSIOLOGY, AND PHYSIOGNOMY come in for a large share of consideration. The health of the human body lies at the basis of sound thought and of true happiness. The necessity for correct principles of living, and for understanding the HUMAN TEMPERAMENTS, is too obvious to require demonstration; and yet, strange to say, very few even of the better educated in society have clear views and accurate information on subjects of such vital importance. The

PHRENOLOGICAL JOURNAL has done much toward popularizing the scientific methods and professional practices of the chemist and physician, and so has opened the way to the publication of many useful works on domestic medicine, etc. The features of our SOCIAL LIFE, bearing as they do so close a relation to mental condition, must be studied carefully by those who would introduce ameliorating elements into methods of education. It is to the *intelligent* training and development of children that measures having in view the substantial benefit of society at large must be applied. We must begin at the foundation of civil society, in order to make progress sure and permanent. "As the twig is bent the tree's inclined."

While we survey the condition of the masses, we can not but realize the urgent need of more efficient reformatory measures. In the conduct of the PHRENOLOGICAL JOURNAL no fact or idea is lost sight of which may be converted to use in the direction of popular improvement. We see that there are more vice, crime, invalidism, sickness, idleness and want by the hundred-fold than there should be; and did every matured man and woman do his and her duty the woful tide would be immensely abated, and inconceivable advantages for individual and general good would accrue. We would witness the rapid disappearance of the thousand prisons, reformatories, hospitals, and asylums which so thickly dot the land, and a freer, purer atmosphere would be breathed by all. The nation would, indeed, take a "new departure" toward a higher stage of civil and political life.

"Let every man do his duty" is our political shibboleth, and it should be accepted and grafted in the working principles of the parties which strive for dominance in affairs of state. Then it would be difficult to choose between them: they would be one in motive and policy.

Here, too, comes in the development of our country's resources—the unmined wealth of mountain, river, plain, and forest. We are among those who would have our nation the foremost on earth, and those instrumentalities which may co-aid toward this consummation shall have our cordial sympathy and support. God is with us. As a nation we are His grand work. Let every patriotic soul—there are many such—assist in the part this generation has in building up our goodly heritage. The foundations as laid are strong; let us see to it that the superstructure is as stable.

The PHRENOLOGICAL JOURNAL is addressed directly to the people; it treats of matters of the utmost importance to every one; it has to do with the body, soul, and spirit of man, and it earnestly aims to benefit its every reader in these particulars. Not as a severe, precise mentor does it come to the subscriber, but as an earnest, candid friend gently solicitous for his welfare, and asking only the verdict of his better judgment. Toward

none does it entertain malice; it has charity for all, especially for the poor victims of vice, crime, and rascality; but it will not treat gingerly those who mendaciously plan for the harm of others; but show them in their true colors, and point them out for the safety and reprobation of the good and honorable.

We aim to help the weak, to encourage the struggling and dismayed, to relieve the oppressed, to reform the vicious, to cure the sick, to benefit all; using in this behalf whatever means, wheresoever found, that may be practicable. The cause is as broad as mankind and as deep as human sympathy; it is universal, and claims universal respect and universal support. D.

GOOD WORDS FROM THE WEST.

THE following letter is from one of our students (Class of 1868), and we place the same on record as a worthy testimonial from a worthy person. There is real encouragement in these kind words, and we would have all our co-workers enjoy them with us:

LEE'S SUMMIT, Mo., Sept. 25th, 1872.

SAMUEL R. WELLS, 389 Broadway, New York.—

Dear Sir: After presenting compliments to the phrenological fraternity of "389," and wishing you and yours much happiness, and long and useful lives in our common cause, you will probably wish to know concerning ourselves. I thought I would write a word of encouragement for your November Class. Tell them there is no subject upon which they can elicit more large and respectful hearings than the Science of Man—none that is more calculated to instruct, entertain, and amuse the masses. I would rather be the means of qualifying young men to take the lecturing field (as you have done and are doing), thus elevating and enlightening the popular mind upon those subjects, than to be the founder of an empire. The money spent in attending the course of instruction is the *best investment* a person could possibly make—even if they should never enter the field as lecturers. You may inquire concerning my own prosperity. Very good. I have bought a home here worth several thousand dollars, and am surrounded with the comforts of life. Still in the lecturing field, though, and expect always to be found at my post of duty. I generally rest in summer-time from continuous labors; expect to spend most of the next lecturing season in Missouri, Kansas, and Illinois. I have gathered together a large collection of portraits, skulls, etc., in my travels—but enough of this. Do you ever hear from the members of "our class?" How many of them are making a success in their chosen field? Wishing you great success, and the November Class a pleasant course, I remain, as ever, fraternally, yours, EDWARD J. MORRISON.

P. S. I have more invitations to lecture than I can fill, and they come to me without seeking.

WISDOM.

If any one has stumbled and fallen, help him up gently, and pass on, before a crowd gathers.

HAPPINESS consists in being perfectly satisfied with what we have got and what we haven't got.

THE ever active and restless power of thought, if not employed about what is good, will naturally engender evil.

MARTYRDOM is never barren, because each man sees on the martyr's brow a line of his own duty. —Mazzini.

TRUST him little who praises all; him less who censures all; and him least who is indifferent about all.—Lavater.

THE greatest of men live unseen to view, while thousands are not qualified to express their influence.—Beecher.

MELANCHOLY falls upon a contented life like a drop of ink on white paper—which is not the less a stain because it carries no meaning.

A MAN is apt to think that his personal freedom involves the right to make his fellow-men do just as he pleases.

AN eminent painter was once asked what he mixed his paints with in order to produce so extraordinary an effect. "I mix them with my brains, sir," was his answer.

In general, every evil to which we do not succumb is a benefactor. As the Sandwich Islander believes that the strength and valor of the enemy he kills passes into himself, so we gain the strength of the temptation we resist.—Emerson.

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

A NEW WAY TO POP IT.—"Won't you take half of this apple?" said a pretty damsel. "No, I thank you, I would prefer a better half." She blushed and referred him to papa.

MOSAICS.

FAREWELL, vain world! I'm going home,

My days are gliding swiftly by;

Oh, put me in my little bed;

I must have rum! Shoo fly! Shoo fly!

There was a man in our town,

This old man's heart with doubt was tossed;

"Come back, come back!" he cried in grief,

"Will th' coming man eat apple sauce?"

At midnight in his guarded tent,

A tear stood in his bright blue eye:

He woke to hear his sentries shriek,

"He never, never, told a lie!"

I SAY *pitch in*, if yu hit the bottom the fust dive—better knok yure brains out agin sumthing than tew lean agin the south side ov a korn krib, and let yure brains rot in yure hed.

Our Mentorial Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage. In all cases correspondents should give name and residence, as our time is too valuable to be spent on anonymous letters.

DANCING.—Does not the familiarity incident to round dances and waltzes have a tendency to undermine modesty and self-respect on the part of ladies, and are not the supposed advantages of exercise overbalanced by the demoralizing effects referred to.

Ans. Any thing which violates one's sense of propriety, according to the usages and the education of the person, will have a tendency to depress Self-Esteem and weaken Conscientiousness. There are many things which are required by cultivated society the neglect of which would bring shame and debasement to the individual; whereas, other persons, just as honest, with just as nice a sense of delicacy and duty, not having been trained to regard those usages, would have no feeling on the subject. The same principle may be applied to the familiarity necessary in waltzing. There would be a natural tendency to excite the emotions and passions in such performances, but we have no doubt that well-bred people can and do rise above any base thought or tendency in connection with it. The light gymnastics or calisthenics of modern times are really better for exercise than dancing. They are being introduced into schools widely, and ought to be universally. They serve all the purposes of exercise, and may be practiced at home or in one's room with all the physical benefit which arises from concerted exercises. These are adapted to age and youth alike. Father and mother and all the children could have a turn at these light gymnastics with equal profit and pleasure at home every day, whereas dancing, in general, is done at set times and on special occasions. We need exercise every day as we need food. Where dancing can be had about once a month or once a week, it does not properly answer the purpose of general exercise. We have known people to inveigh against dancing of every kind. The very name was enough to condemn it, but they would join in plays in which running, scuffling, scrambling, ending with kissing on each occasion, was

the order of the hour. We never heard a sermon preached against this, and whatever violation of decency, propriety, or morality might have existed, or might have been supposed to exist, we do not remember to have heard it condemned in public; while we have heard dancing in the ball-room spoken of as the gateway to perdition. "Evil to him who evil thinks" contains wisdom and common-sense. In most European countries dancing is common among religious people. Among Puritans, on both sides of the Atlantic, dancing has been ignored and repudiated; but outside of the Puritans and Methodists we are not aware that religious bodies have inveighed against dancing. We advise people who are conscientious on the subject, to obey their conscience.

We are satisfied that in countries where morning prayers are said on Sunday, and then the afternoon is devoted to pleasure, recreation, and amusement, the people do not violate their conscience; but in New England men could not practice relatively to the Sabbath in that way and be guiltless, yet conscientiousness and desire to do right in both communities may be equal. How are they educated? The Catholic feels bound to go to morning prayers for an hour. He would not pass the church or look at the altar in the church without crossing himself and without bowing, but he would have a jolly time in the afternoon of Sunday; while the Puritan would stand stiff as a post before the picture of the Virgin or Saviour; he would stand up to pray and would keep the whole of Sunday without amusement, and feel bound to think holy thoughts with sobriety.

INTEREST.—What is the meaning of Democratic interest? also, farming interest? local interest? clashing of interests? Webster's Dictionary does not define these terms in the sense they are used.

Ans. The word "interest" has come to be used very generally as representative of the various branches of activity in which people are engaged, whether moral, intellectual, or mechanical. Its strict meaning, like that of many other words in common use, is merged in the new application, and instead of expressing by it the attribute or quality of a class, we use it as a collective or, perhaps more logically, copulative designation of the class. According to Webster, the primary meaning of "interest" is, special attention to some object; concern; sympathy; regard. From this definition it may be seen how easy the transition of the word from its qualitative to its substantive application! We might have said "Democratic party," but what is the Democratic party but a

body of men interested, concerned, in promoting the Democratic view of matters political?

As for "farming interest," and the others, their representative interest is clearly indicated. *Local* interest stands out in contradistinction from *general* interest, indicating the concern entertained by individuals or by a community in the welfare of a particular place. "Clashing of interests" denotes the opposition or collision of enterprises which have more or less relation to the same object.

THE DIVINING ROD.—For eight hundred years the Divining Rod has been believed in by many people, not a few of whom are the best educated people in every country. We recently received a letter asking us these questions:

"Is there an instrument for indicating the presence of minerals? What is the cost, and where can it be obtained? Does it require an experienced person to operate it?"

Ans. The Divining Rod is supposed to indicate the hidden flow of subterranean courses of water and the deposition of valuable ores. As commonly used, the Divining Rod is a forked slender stick of witch hazel; but elastic twigs of any sort, or even two whalebones fastened together at one end, are used when the hazel tree can not be found. The twigs are bent outward and held between the thumb and fore-finger of each hand, the stem standing upward; the diviner walks seriously over the field, and the stalk or stem of the twig is said to bend over, as if by attraction toward the ground. We have seen the stick used. A little imperceptible effort and will on the part of the diviner, and a slight movement of the hand, would bend the twig down wherever he wished. We suspect that those who are honest in its use are not conscious of exerting a muscular influence in this manner.

A writer in the *American Journal of Science*, more than forty years ago, detected the fallacy of the Divining Rod, by leading the operator, blindfolded, over the same ground where he had previously indicated the location of water or minerals, but he did not point to the same place twice. The Divining Rod can not very easily make a mistake as to water, because it will be found by digging far enough anywhere. We beg our readers to believe that the Divining Rod, no matter what men may honestly think to be true about it, is of no value whatever. If one is in search of gold, iron, silver, copper, and coal, let him employ a mineralogist or geologist, and his success in pointing out the localities of ores will not be doubtful; but let him have nothing whatever to do with diviners or Divining Rods; they are of a piece with hundreds of other popular myths and mysteries, such as the planting of potatoes in the old or new of the moon, or cutting timber according to the moon. Not two years ago we heard a farmer about seventy years of age, of excellent sense, make this remark. Some one said that a neighbor was losing his eyesight; there was a kind of

cataract or film growing over the eye. The farmer instantly spoke up with animation, "If it was the film on the eye of an ox I should know instantly what to do with it." When asked by the writer, he replied with energetic enthusiasm, "I would put a handful of fresh butter into the ear of the ox, on the opposite side; that will take the film off the eye of an ox pretty quick." Of course this farmer had never read scientific works; and the film on the eye of the ox may not have been of any permanent character, but he was in earnest, that with fresh butter put into the opposite ear, it would work a miraculous cure on the eye of the ox. Farmers have a great many old superstitions. We remember another incident. A worthy man was very sick with rheumatism; his legs and feet were badly cramped, and he was suffering severely; during a painful spasm he spoke to his wife and said, "My dear, look under the bed and see if my shoes are turned bottom side up?" She stooped down and found they were all right. On inquiry afterward we learned that the theory was, that if a man wanted to avoid rheumatism, he must turn his shoes bottom up every night under his bed; and if they happened to get changed by accident the rheumatism would seize him. We could name scores of these absurd superstitions, but we beg of our readers to discard the whole of them. Read *SCIENCE*, and that, rightly understood, will not lead you astray.

TELEGRAPHING.—What course can I pursue to obtain a position as a telegraphic operator? I have a liberal education, have studied the subject of electricity, and am competent to take charge of telegraphic apparatus. Can give good recommendations as to character, ability, and deportment. I do not smoke, chew, nor drink. Any advice would be thankfully received.

Ans. We like your habits, and doubt not you can bring your talents into profitable use. If one can not give just the information required, the next best thing is to refer the person to those who can. Therefore, we refer to the *Journal of the Telegraph*, 145 Broadway, New York, and to the *Telegrapher*, 194 Fulton Street, New York. The editors of these papers, doubtless, would be able to give valuable information. There is at Cooper Institute, New York, a school of telegraphy, which, perhaps, might give light on the subject.

A PREACHER.—Will you please inform me, through the *PHRENOLOGICAL JOURNAL*, which should be the predominating organs or faculties of the brain in order to be a successful Methodist minister?

Ans. We may state, in general terms, that the heads of *Methodist* ministers are not very different from the heads of other Protestant ministers. If one be converted, sanctified, and have sufficient grace, with a fair quantity and quality of brains, a good constitution, and sufficient education, he may, if he have a "call," preach acceptably. He must have a good intellect and a good moral character to become a useful medium between men and their Maker. Read Beecher on Preaching.

WHAT is the best book to teach me how to measure tin roofs, etc.?

Ans. For measuring plain tin roofs, common arithmetic will do the work. For the measurement of irregular surfaces, any work on geometry will give you the rules. "Blinn's Practical Workshop Companion for Tin, Sheet-Iron and Copperplate Workers," price \$2.50, will give rules for making patterns for nearly everything in that line.

What They Say.

REST AND RECREATION.—Mrs. B. F. Baer writes: In one of the September articles an author asks, "Is it possible that care-worn looking woman is Ellen Smith, the once gay, rosy-cheeked companion of my dancing-school days?" This question awakened a train of thought. My mind reverted to my own school days, so full of girlish friendships, frolics, and gayeties. I wondered if my school friends, most of whom I have not seen for years, would know me now at twenty-six, the mother of three children, my forehead furrowed with maternal cares, often having to do the work of the entire household. I began to think our September correspondent could scarcely have been a wife and mother, or she would have found more excuses for the pale, care-worn looks of her once gay friend. It is a beautiful theory to talk about these rests, recreations, park walks, etc., but when it comes to the practical part of them, a married woman with small children to care for, a large house to keep in order, workingmen to cook for, sewing to do, etc., finds it simply impossible to indulge in them. "But, certainly, she can have help." Yes, provided she can get it. Working-girls are becoming scarcer every day, and more difficult to procure. When we have them the leisure moments are theirs, not ours; and we have to conduct ourselves at all times with the utmost circumspection. A hasty word, a quick-spoken order is all that is necessary to insult our "help," and we are left in the lurch. This is not a pleasing picture, yet as every cloud has its silver lining, every position in life has its joys; for who would exchange a mother's deep and holy love for all the rest and gayeties of a whole world? What true wife would exchange a husband's noble affection for the pleasures of a single life? Yet, while the labor question has gone into politics, and strikes now and then agitate every branch of trade, we candidly ask, Can't something be done to insure our noble women reliable help? Do some of our politicians, who are so strenuously opposing the importation of Chinamen, ever think of the middle class of American women who are straining every nerve to its utmost tension to raise their families in virtuous respectability? I think if they could feel the tired despondency which often weighs us down as we go about our daily routine

of duties, knowing that we must do the work of two, there would be a change, and that for the better.

DISEASE.—E. F. D. is, in great part, correct in his views of disease. Epidemics of an extended character are due chiefly to atmospheric conditions, the poison which generates the disease in *receptive* organizations existing in the air. Many of our best medics concur on this point. The article on "Cholera," in our October number, refers succinctly to the predisposing influences and preventive measures. Disease, as E. F. D. intimates, is due to physical derangement or a lack of balance, a lack of oxygen, or an excess of carbon, inducing sickness, which, if not soon abated, results more or less seriously to the person. To live well we must live in accordance with Nature's laws, suppressing our desires and caprices for the improper in food and habit.

In noticing a late number of this Journal, the *Printers' Circular*, of Philad'a., remarks:

"So well known and highly popular has this publication become, that it needs no commendation at our hands. It has established a reputation in public favor that can not be obliterated. The contents of this number embrace a large variety of subjects that can not fail to impart useful information to the reader. It also contains portraits of many of our public men, and other illustrations."

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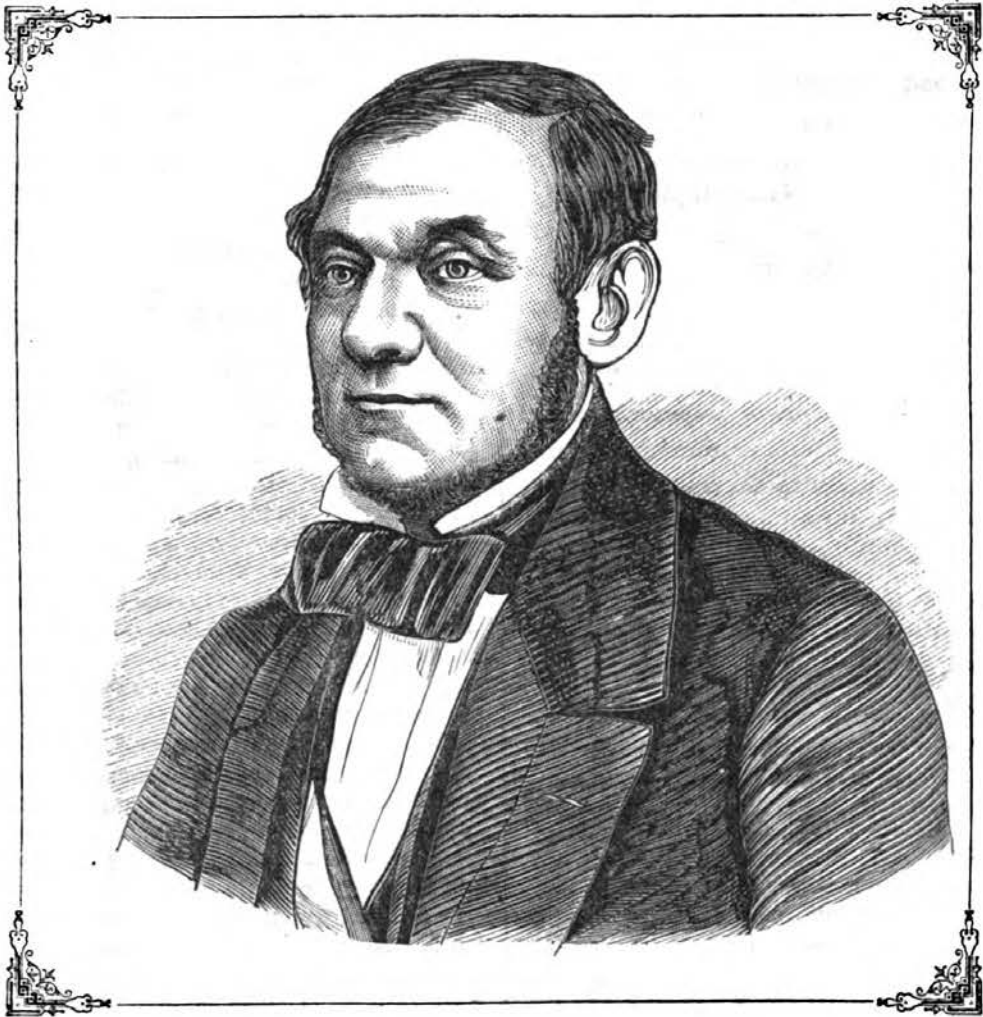
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THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

VOL. LV.—No. 6.]

December, 1872.

[WHOLE No. 407.]



WILLIAM B. ASTOR.

READER, what are your impressions in regard to this head and face? Were the portrait printed without a name, what would you say of it? Analyze the features, observe the shape of head, study the temper-

ament, then sum up the character. That is clearly a German type of face, a German head, and a German body. The brain is not large, but in fair proportion to the size of body. The intellectual lobe is full, the per-

ceptive faculties predominating over the reflectives. The eyes are the finest features of this face. They are not large, but expressive, set well apart, and have a scrutinizing look which seems to measure accurately whatever they see. Order and Calculation are among the largest of his phrenological organs. Method and computation would be instinctive to such a brain. There is enough Firmness to give decision and perseverance; enough Self-Esteem to give assurance and self-reliance; enough Acquisitiveness to render him prudent and economical in expenditure and sagacious in investments; but there is not enough love of approbation to make him care for public applause, display, praise, or blame. He enjoys a happy indifference as to what we or others may say of him. He minds his own business, and expects others to mind theirs. There is very little poetry, imagination, or fancy in that head. He is no inventor, schemer, or projector. Instead of trying experiments or running after new notions, he sticks to the real, to what he knows, and will take stock in no problematical oil wells, railway projects, or in any games of chance. This is a truly conservative nature, one that seldom changes its course, and cares little or nothing for social, political, or religious agitations.

So much for the portrait, which we do not claim to be a fine likeness of Mr. Astor, but which is the best we have been able to procure.

Among the moneyed men, of whom there are so many in the United States, William B. Astor is conspicuous. Perhaps he owes his reputation, in great part, to the fame acquired by his father, John Jacob Astor. Every one knows how the latter, at the age of twenty, left his home in Baden, walked to the nearest sea-port, and there engaged a passage for New York, spending his last penny in this effort to reach the New World. On the voyage he sold a half-dozen flutes, which were given him by a brother then residing in London. Twelve dollars were the result of this little business operation, and laid the foundation of his princely

fortune. From that small beginning he steadily rose, until he established the American Fur Company, and had his agencies wherever the *materiel* of his business was to be procured, and at his death left an estate valued at not less than \$20,000,000.

William B. Astor, whose energy, executive ability, and prudential measures have greatly expanded the colossal fortune inherited from his father, was born in New York, in March, 1794. At the time of his birth, New York had a population of but 30,000. George Washington was still alive; Thomas Jefferson was President of the United States; Napoleon Bonaparte was entirely unknown; the French Revolution was filling the world with horror; and American affairs in general were settling down after the violent agitations of the late Revolution. Bowling Green was then the center of metropolitan trade. Vesey Street, although but half a mile or so above Bowling Green, and now a far down town thoroughfare, was in the rural suburbs; Wall Street and its vicinity was the fashionable quarter, the residence of the city's grandees.

Young Astor received such opportunities for education as were then procurable in the city for a lad, and his father, thinking there were better advantages in fatherland, sent him to Heidelberg. He remained there several years. His university studies finished, he returned home, where he remained a short time, and then revisiting Europe, traveled considerably, stopping here and there to examine places of historical and classical interest. On his return his father remarked:

"You have shown the good effects of your university education."

"In what particular?" asked William, knowing well that there was some joke in the wind, for no one was fonder of indulging in pleasantry than his father.

"I expected you would spend \$50,000, and you have only drawn on me for \$10,000."

"I am glad you are pleased," said William; but to this day he confesses himself in doubt as to whether the old gentleman meant the remark in commendation or in reproof of his traveling expenses.

He entered his father's office, and not long afterward became associated with him in the business, and in the last few years of his father's life he had the entire management of it. An uncle, by the name of Henry Astor, died before his father had "shuffled off this mortal coil," leaving William half a million of dollars, which amount was judiciously invested, so that

long before he stepped into his father's shoes he was a man of enviable wealth. The Astor House, that famous caravansary, was built in 1835, on the site of what was John Jacob's residence, which, in itself, was a very respectable house in those early days of the city's growth. The story of John Jacob's sale of that vast hotel to his son is well known. Shortly after its completion, the old gentleman and his son were viewing it, when the former remarked, "How do you like it?"

"I am very much pleased with it," William replied.

"So you like it?"

"Yes."

"Give me a dollar and the building is yours."

Many have doubted this story, but it is true, and William was not long in paying over the dollar and consummating the bargain.

It was about twenty-four years ago that John Jacob Astor died and was buried in the vault of St. Thomas Church. In his will, a most elaborate legal document, William B. was indicated as the principal legatee. His patrimonial inheritance, with what he already possessed, made him the richest man on this continent. The first thing he did after coming into possession of this estate was to carry out the bequests of his father. He sent one of his own sons to Waldorf, in Germany, where his father was born, to superintend personally the disposition of certain funds bequeathed for the establishment of a charitable institution. A building was erected and \$43,000 invested for its permanent maintenance. The aged and infirm, irrespective of color or religious belief, orphan children from the ages of six to fifteen left without support, blind and deaf and dumb persons, and homeless infants are there provided with a comfortable home. The name of the institution is the Astor House, and is now in a most flourishing condition.

"I take great pride in the Astor House of New York," Mr. Astor has been heard to say, when referring to this institution, "but a greater pride in the Astor House of Waldorf. The massive granite blocks and pillars of the former may crumble and fall to the ground, or its columns and corridors become choked with weeds, but the latter will continue in existence while the town of Waldorf exists and there are any poor people in it."

To Fitz-Greene Halleck, the well-known poet, and who had been the friend and secretary of his father, he said, "My father has done you great injustice."

"In what respect?" asked the poet.

"Leaving you only \$300 as an annuity."

"He paid me for all the services I rendered him, and I had no additional claim on him."

"I think you have claims on the estate," pursued Mr. Astor, "and as a mark of appreciation I have raised the annuity to \$1,500."

"Thank you, thank you," spoke up this noble and gifted son of song, and he could say no more. The closing years of his beautiful but sad life were by this act of timely liberality lifted above care, and his pathway to the grave strewn with pleasant flowers.

To a sea captain who had been in his father's employ for many years, and who had conducted himself with rare fidelity on more than one occasion of embarrassment and imminent loss, he said:

"You saved a large amount of property in China for my father."

"Yes; your father's agent died, the property was imperilled on this account, and I saved it and turned over to your father \$700,000."

"And he never paid you anything?"

"Not a dollar."

"I'll pay you," and he filled out a check for \$25,000 and gave it to the captain.

One of the noble provisions of John Jacob Astor's will was for founding the Astor Library. It was faithfully complied with, and any one who is familiar with that short and airy street, just far enough removed from Broadway to be retired and quiet, Lafayette Place, needs no special hint to point his attention to that beautiful building in which is stored the most valuable collection of books on this continent. The original edifice had a frontage of 65 feet, and a depth of 120 feet, with huge arched doorways and windows, and a tasteful keeping generally with the grand purpose to which the building was dedicated. Mr. William B. Astor was not satisfied with the building which had been erected pursuant to his father's will. Appreciating the beneficent results of a valuable library in the midst of a growing community like New York, he saw that it was quite essential to expand the work so far done. He put up an adjoining building of about the same magnitude and plan of the first, and expended \$200,000 in additions to the list of books. It is said that Mr. Astor has expressed the purpose of erecting another building of the same size of that already built, and then providing still further for the increasing wants of our increasing population; and he has intimated that he aims to make the Astor Library as valuable a depository of books as any in the world.

Mr. Astor has none of his father's liking for trade. As the large accumulations which rolled up the mighty fortune of his father were due to the enhanced values of his investments in real estate, he early turned his attention to real estate and long leases of property like that of the Trinity Church Corporation. His memory is said to be wonderful, that it is so retentive that he can tell every square foot of property which he owns, the exact date when each lease expires, and the amount due on it almost to the penny.

He lives in Lafayette Place, close to the library, in a handsome though somewhat old-fashioned brick house, which was built and given to him by his father. His manner of life is exceedingly plain for one in his position. He takes excellent care of his health, being prudent in his habits, fond of walking, and indisposed to ostentation or luxurious equipage.

In stature he is fully six feet, with a heavy, strong frame, coarse features, small eyes, and a physiognomy in general by no means impressive. So constitutionally strong and well-preserved is he, that no one seeing his erect figure and brisk bearing would suppose him to be as old as he is by at least fifteen years, and he appears likely to see his hundredth birthday. His face is full and ruddy, with slight side whiskers. He dresses plainly, and avoids anything like parade.

He is reported to be very charitable on occasions, but those who claim to know him well say that he is less liberal than his father was. He rarely gives to solicitors for charity, and among those who make it their business to collect money for benevolent enterprises he has the reputation for extreme closeness and parsimony. During business hours he gives attention solely to business; outside of this he shows a liberal spirit, provided he finds the object that has been recommended to his attention to be worthy; but his charitable offices are done in a very private, reserved way, as he has no ambition to gain a reputation for mu-

nificence. Mrs. Astor may be her husband's almoner in great part, as that lady has a most estimable character for genuine benevolence. It is true enough that the public is very exacting of the wealthy, who are roundly abused when they decline to open their purses at its dictation, and, as a class, they are so besieged and importuned with applications, to say nothing of their being imposed upon and cajoled, it is not at all unnatural that they should become somewhat hardened to solicitation. If Astor or Stewart responded to all the calls made upon them for assistance; if they permitted themselves to be frightened into compliance with the threats of black-mailers, they would be beggared in twelve months. We hear people in cramped circumstances now and then declaring that they "would be so liberal" if they had large incomes; and from the many experiences which we have in the way of the manifest parsimony of individuals suddenly grown rich, we feel warranted in saying that we have no confidence in such declarations.

Before closing this somewhat long sketch, we may say, in reply to the question which has occurred doubtless to the reader, "How much is he worth?" that we do not precisely know; and it is said that Mr. Astor himself would be somewhat at a loss to answer it with exactness, but some sanguine individuals estimate it at \$75,000,000, and it increases rapidly every year with the advance in New York real estate. As to his income, we are told that it exceeds that of the Emperor of Germany. The same, however, may be said of Stewart and Vanderbilt.

Mr. Astor married Miss Armstrong, daughter of General Armstrong, Secretary of War under James Madison when President of the United States. Six children have been born to them, three sons and three daughters, all of whom, except one daughter, are living and have families of their own. They reside chiefly in the city of New York.

ANCIENT HUMAN CRANIA.

DURING the interesting proceedings of the late meeting of the Social Science Association at Dubuque, Iowa, Dr. J. W. Foster, of Chicago, presented some peculiarly-shaped human skulls, and some drawings descriptive of others as strangely formed, on which he commented as follows:

There have been several skulls discovered

in Indian mounds widely separated as to locality, which seem to have a common type utterly unlike those of any other known human crania. These skulls, taken respectively from two groups of mounds, about five miles apart, on the Des Plantes River, in the vicinity of Chicago; from the neighborhood of Merom, a station on the Cincinnati and Terre Haute

Railway, Indiana; and from the vicinity of Dunleith, Illinois, just across the Mississippi from Dubuque, Iowa, present these marked peculiarities in the most extreme degree. In the first of the two groups of mounds near Chicago, portions of eleven skeletons were found; but only one skull and three frontal bones were sufficiently well preserved to admit of measurement and comparison. The other group of mounds yielded human remains evidently belonging to two distinct eras, one of which must have been exceedingly recent. In addition to these were found, nearly on a level with the original surface, many skulls far gone in decomposition, and presenting peculiarities not appertaining to the existing Indian. To these Dr. Foster is inclined to assign an antiquity of several hundred years, and thought them to be undoubtedly those of the Mound Builders, and of the highest value to the antiquary.

So abnormal was the appearance of these skulls when first discovered, that Dr. Foster had difficulty in satisfying other investigators that these skulls had not been subjected to compression. But the shape is entirely different from that of the Indian skull or any other, compressed or otherwise. The skulls of Europeans (Caucasian) and of American Indians were compared with the Mound Builder. The Caucasian skull is developed more completely than the Indian in every direction, except in a nearly horizontal line thorough the head, somewhat above the ears, and is somewhat boat or egg-shaped; that of the Indian somewhat approaches the shape of a block with the corners rounded off. [In fact, it is quite conical, Firmness and Self-Esteem jutting out conspicuously at the top, and Destructiveness, Secretiveness, and Combativeness being very marked at the base.] But the Mound Builder's skull is like that of a bird, and needs only a beak to complete the illusion. It rounds down equally from the apex to both front and back, with no forehead worth naming. [In other words, the perceptive faculties are apparently the only division of the intellect represented in the brain, so immensely do they predominate over the others.]

The measurement of one of the Chicago skulls, as determined by Dr. Bridge, is as follows: Circumference, 20.25 inches; around longitudinal arc, 15.5 inches; vertical height above the glabella-occipital line, 3.8 inches; extreme longitudinal measurement, 7.6 inches; extreme transverse, 5.75 inches. The skull is not quite symmetrical. Its general outline is dolichocephalic. Its differences, compared

with a European skull, are, notably: the large development of the superciliary ridges, the greatly depressed forehead, the occiput not merely flattened but forming an oblique line upward, while it occupies the extreme posterior part of the skull. Three skulls from the Kennicutt mound exhibited remarkably prominent supra-orbital ridges and peculiarly retreating foreheads; one of these being even a more retreating forehead than that of which the measurement is given above. "I think," says Dr. Foster, "that no one can view this fragment, with its great, massive superciliary ridges, its low, flat forehead, and its thick, bony wall, without coming to the conclusion that its possessor when alive must have been essentially a ferocious brute. Of two crania from the Hass' Park mounds, one is distinguished by almost the entire absence of a forehead; the orbital rings are sharp, without the least sign of a superciliary ridge; but the region of the glabella rises up in a ridge, and the nasal bones are projected like the beak of a bird or of a garpike. The skull is only of the thickness of pasteboard. The brain capacity is not large. Without indorsing Phrenology, Dr. Foster thinks it may be admitted that observation justifies the assignment of particular faculties of particular parts of the brain: as, the seat of the intellectual faculties in the anterior lobe, of the propensities which most link us with the brute in the middle lobe, of those that appertain to the social affections, in the posterior lobe. Judged by these tests, we may infer that the Mound Builders were not as intellectual as the Indian, but less crafty and cruel."

[Without assuming a captious spirit, or appearing hypercritical, we may venture a remark or two here with reference to the measurements given above. Inferentially, as we have had no opportunity to examine these crania, we think that the order of mentality was not quite so low as the learned Doctor is inclined to rate it. The circumference, twenty and a quarter inches, is by no means insignificant as compared with the modern average of twenty-two inches. The height, three and eight-tenths inches, to be sure, is nearly two inches less than a modern European's cranial depth, but the length and breadth are about the modern average.

The *quantum* of brain being for the most part due to the depth of the cranial cavity, a close comparison of the skull of an average member of our modern civilization with one of the "bird-shaped" would indicate a very great difference in favor of the former, and its rela-

tive mental superiority. The Indian occupies an intermediate position between the Mound Builders and the White, with, however, a larger development of the lateral region of the brain contiguous to the ears. It would be difficult to analyze these ancient skulls and predicate of their comparative mental qualities without the assistance of Phrenology, although some of our scientists, unlike the eminent Professor Morton, take some pains to express their disbelief in the tenets of Phrenology, and in the same breath give utterance to views confirmatory of phrenological principles. Where does Dr. Foster find so definite a division of the brain as that which he summarily enunciates, in his address with the proofs, except in the writings of phrenologists, or in the speculations of those who have borrowed the solid matter of their hypotheses from phrenologists?]

Dr. Foster then went into an analysis of the peculiarities of ancient Peruvian and Aztec skulls, and compared them with North American Indian skulls and the skulls of the Mound Builders. The similarity between Peruvian and Mound Builders' skulls is noticeable. Dr. Lund, a distinguished Swedish naturalist, says: "The human figures sculptured on the ancient mounds of Mexico represent, for the greater part, a singular conformation of the head—being without forehead, the cranium retreating backward immediately above the superciliary arch. This anomaly, which is generally attributed to an artificial disfiguration of the head, or the taste of the artist, now admits of a more natural explanation, it being proved by authentic documents that there really existed in this country a race exhibiting this anomalous conformation. The skeletons, which were of both sexes, were of the ordinary height, although two of them were above the common stature. These heads, according to the received opinion in craniology, could not have occupied a high position intellectually." Rivero and Tschudi believe that the artificial disfigurements of the skull among the Inca-Peruvians owe their origin to the prior existence of an autochthonous race having this peculiarity; and they further state that such peculiarities are in some cases congenital, having been found in the fetus in Peruvian mummies. As to the shape of the skull being produced by compression, Professor Morton has pointed out that where this is attempted the volume of the brain is not diminished, but simply transferred to parts of the head where the pressure is not applied. Dr. Foster had examined skulls of the Flathead and Chinook Indians where the forehead is

depressed, but there is an enormous prolongation of the posterior region, and the line between the occipital protuberance and the intersection of the lambdoidal sutures, instead of being vertical, as in the normal state, is curved outward, so as often to bring the occiput point beneath the skull, and in a line with its base. The back-head of the Flathead Indian, as drawn by Dr. Foster on the blackboard, was not unlike that of the ladies of two or three years ago when the round waterfall on the back of the head was fashionable. But on examining the skulls of the Mound Builders it was evident that there was no such swelling at the back. The occiput forms the extreme posterior part of these skulls, from which the line of the cranium curves upward and inward. Moreover, it has been shown that wherever bandages have been used for depressing the skull, it is marked by bony ridges or depressions, which do not exist in the skulls in question. It may be safely asserted that there are certain coincidences in the configuration of the head between the primeval inhabitants of Brazil, the temple-builders of Peru and Mexico, and the Mound Builders of the Mississippi Valley.

In the discussions that followed the exhibition and analysis of the crania, Dr. Foster said that Professor Morton had placed too much emphasis on what he called typical types. Nevertheless here were facts which could not be thrown aside. Among the bones disinterred at Merom, Indiana, there were also thigh-bones of which the shape of the femur was peculiar and different from that of Europeans. Col. Forshey asked whether these differences of cranium and femur justified the announcement of a new species of man, to which Dr. Foster replied in the negative. Professor Putnam thought we had scarcely a sufficient number of these low-browed skulls to assume that they were typical of the Mound Builders. A large majority of the skulls taken from these mounds were not of this extreme form at all—they were of the box-shape or Indian skull. At the utmost he thought that if there were originally a race of Mound Builders with low foreheads, it was absorbed or driven south again long before the Mound Builders, as such, ceased to exist. Professor Winter announced a new locality of mounds and skulls in Michigan. A few specimens of the real Mound Builders' skulls had been found there; not quite so much depressed as those shown here, but an intermediate form between the Indian and the extreme Mound Builder. Dr. Foster stated that

Dr. Wallace collected sixty skulls from the Malays and found every variety of race forms, apparently, among them. The skulls of any given race differ widely among themselves. Dr. Foster did not wish to be understood as saying that the Mound Builders were a race exclusively having depressed skulls; but he considered the coincidence of these numerous discoveries indicative of the fact that large numbers of men of this remarkable conformation must have existed among the Mound Builders.

[Should any of our readers who have not given much attention to the shape and contour of heads examine carefully those of their friends, taking measurements and sketching their hor-

izontal and vertical outlines on paper, they will be surprised by the variety which will thus be discovered. Even among members of one family will be found marked variations. Hence it may be seen that the skulls shown by Dr. Foster do not *necessarily* indicate a different species or race of the Mound Builders, but may be the relics of individuals of the same general family who were not so happily endowed as their brothers. If those skulls, however, exist in large numbers, the lapse of time since their owners lived in them being of course considered, the presumption would be but fair that they represent a different class of human thought and life, a closer approximation to primeval man.]

Department of Religion and Psychology.

Know,
Without or star, or angel, for their guide,
Who worships God shall find him.—*Young's Night Thoughts.*
The soul, the mother of deep fears, of high hopes infinite;
Of glorious dreams, mysterious tears, of sleepless inner sight.—*Mrs. Hemans.*

MAN AS AN INHABITANT OF TWO WORLDS;

OR, THE TESTIMONY OF CONSCIOUSNESS.

BY HENRY C. PEDDER.

IF in addition to the testimony of revelation we required any evidence relating to the dual character of our existence, and the relationship which we bear to the visible and invisible worlds, we could not long remain in doubt if we attended carefully to the peculiarities of our nature and the profound mysteries which our consciousness suggests. Formed as we are as to the *esse* of our nature by a Power which it is impossible for even the highest intellect to comprehend, and sustained as we are as to the *existere* of our nature in a manner that equally transcends our finite capacities, it does not appear that we can ever realize *thoroughly* what may be termed the mystery of life. And it does appear that we are so constituted as to *feel* that we are related simultaneously to two classes of phenomena, constituting the *sine qua non* of human existence. And this it is which shall form the subject of my remarks; at the same time I will endeavor as far as possible to illustrate the supremacy of mind over matter.

It may be true that the fact of our consciousness is in itself but a phenomenon, and, therefore, dependent on something higher as its

cause. This is to a certain extent undeniably true; but it is also quite as true that as it is the fundamental verity which renders existence possible, and as it expresses itself under all conditions of human life with certain degrees of consistency and similarity, it commends itself to us as the great basis on which to rest all our ideas of human nature, if not the great ocean of life to which all other circumstances and conditions are but so many tributaries. As it expresses itself under its various forms, and manifests itself in keeping with certain conditions which largely influence its method of expression, it will at times seem a little inconsistent with itself, and in many respects exceedingly weak and unreliable. But even here, if we are careful to observe the general tendency, there may still be seen the evidences of a universal principle running through and pervading the world-wide character of human consciousness.

Indeed, "the disposition of the human soul to seek for its own prototype, and to start at its own shadow in the outward universe," is a fact which is so clearly established and so generally confirmed as to leave no room what-

ever for doubting its universality and profound significance.

In one form of its expression it may be that of the poor red-skin "living in continual apprehension of the unkind attacks of spirits, to avert which he has recourse to charms, to the fantastic ceremonies of his priest, or the powerful influence of his manitous." In another it may be that of the North Australian native, "who will not go near graves at night unless he carries a fire stick to keep off the spirit of darkness." In another it may be that absurd superstition which induces the women of Greenland, during an eclipse, to pinch the dog's ears with the view of ascertaining whether the end of the world is at hand. In another it may be that peculiar notion of the Fijians, according to which they believe that "the spirit of a man who still lives will leave the body when asleep to trouble other people." In another it may be that extraordinary belief in witchcraft which prevails so largely among all uncivilized nations. In another it may be the beautiful Grecian myth of Psyche, embodying and expressing the immortality and gradual purification of the soul. Lastly, it may be under that condition of life and habit of thought with which, as members of a Christianized civilization, we are all familiar. Now, under all these conditions there is obviously a very great difference in the effects produced; but yet if we examine them closely there is a family resemblance which establishes the belief that they emanate from, and proceed according to certain inherent qualities of the human soul which are inseparable from the circumstance of human life. Beginning, if we please, our point of observation from that period in human history when the believers in "original purity" would represent man as surrounded by everything that is beautiful and chaste; or when, as the ancients represented it, *Astræa*, in the form of a beautiful maiden, dwelt on earth, blessing men and rendering them happy by her divine presence, and following him through every diversified stage of his existence until we reach him in that low condition of barbarous life when he has no religious conception otherwise than of evil deities, he is still, as regards the great substratum of his nature, a man. In many of his propensities, in many of his ideas, it may be very difficult (under this last phase of his existence) to discriminate between him and the Simia; but even here there are general evidences and indications which impress every thoughtful mind with a sense of their significance. With

respect to the exercise of his rational faculties, he may be a mere infant; with respect to his attainments in general culture, he may be comparatively less in stature than Gulliver's Lilliputians; but as a man, as a living soul formed for the reception of influences from the external world, and the association of these influences with his spirit as a human being, he is governed by one common law, which, operating universally on the entire domain of human nature, develops a certain class of feelings which can only be referred to the fact of our consciousness.

Nor is it anything against this view of human nature to argue that it partakes too much of the "exploded" doctrine of "innate ideas." As it is intended, and as I trust it will be interpreted, its definition is not to be found in this direction, being instead merely an expression of that germinal principle from which all ideas necessarily emanate, and without which it would be impossible to *feel that we live*.

As a consequence arising from the close resemblance which the lower animals bear to man in many respects, I know that the simple association of ideas is predicable of them as truly as it is of man. But between this and the germinal principle interwoven in our consciousness as human beings, there is a wide difference which we can not consistently overlook. With the animal there undeniably exists the ordinary power of sensation and the train of ideas which this feeling begets. With man there is a naturally intuitive sentiment which, while it comprehends all ideas that can come within the experience of the animal, also rises into a higher region wherein the soul, in some form or other, makes for itself a deity, seeking thereby for a responsive utterance to its own mysterious nature. By some scientists I am aware that it is very much questioned whether this feeling of intuition and this testimony of our consciousness are of any weight in strictly determining whether we are or are not possessed of an immortal nature. But clearly the universality of the sentiment, and the power which it exercises over each one of us, must be of some weight in enabling us to realize the verity of a matter which is beyond the range of sensuous perception; and to which even so great a scientist as Professor Huxley alludes in his article on "The Use of the Imagination in Scientific Thought," as being of the greatest value in enabling us to realize the profound character of our existence and the relation which it bears to the Infinite.

Indeed, the relation between the visible and

invisible worlds is so exquisitely perfect that it becomes impossible for us as human beings to look on the one without feeling that we are in some measure looking also on the other. For instance, the beauty of the material world addresses itself to our senses, and what is the result? Is it that we merely look upon it as an unmeaning picture, bearing no suggestions, no higher signification than the materialized expression of a lifeless beauty? Is it that we gaze day after day, night after night, upon the sun, the moon, the stars, and all the various forms of grandeur, beauty, and immensity which fill all space, and yet do not feel that there is a something in our inner life which responds in a mysterious manner to these materialized expressions of the infinite? As we move about the world, enjoy its uses, realize its beauties, and analyze its mysteries, is it possible for us to shut our eyes to the relationship which exists between man as a spiritual being and nature as a Divine Volume, everywhere open for his instruction, and for the purpose of elevating him "through nature up to nature's God?" No; this is not the testimony of our consciousness, nor is it possible under the dual character of our existence. By a process which is as perfect as it is benevolent, the human mind finds itself irresistibly carried toward the infinite, the unknown, and the invisible, whenever we come into the presence of those objects in nature which give rise to the feeling of awe and sublimity. According, also, to the same principles and the relationship between the external world and the internal man, the unpretending violet and the blushing rose suggest to us much that leads to the realization of a purer and better world, wherein those qualities in our nature which give such intense enjoyment to the contemplation of these forms of beauty, shall be more perfectly developed and more thoroughly understood. Possessing as we do a spiritual nature which asserts itself in our every thought, and which the material world by our impressions of its objects confirms to a large extent, we are necessarily brought into certain phases of experience which not only imply the existence of another life, but the chance of our immortality. They do more: they impress us strongly and deeply that the *cogito* which we are compelled to affix before the *ergo sum*, has an infinity of meaning allying us at once to two worlds, and immeasurably transcending the ordinary idea which carries us little farther than "bipeds without feathers." In fact, a little reflection will very soon convince us that thought is

existence and existence is thought, because we are compelled to submit to our consciousness as the ultimate test by which our impressions of everything must necessarily be determined.

As an example of this let us mark its operation as illustrated in one of the most strictly scientific minds that the world has ever seen, viz.: that of René Descartes. In his philosophical investigations this great mind commenced by declaring doubt to be a duty, and he ended by declaring consciousness alone to be certainty. In other words, by the most careful analysis and the profoundest meditation he realized "that idealism which declares the ultimate fact of all knowledge to be a consciousness or mental phenomenon; and therefore affirms the highest of all certainties, and indeed the only absolute certainty, to be the existence of mind." And is not this precisely what each one of us must realize before we can flatter ourselves that we understand even the first principles of human existence?

In this respect it matters not that a great many of us have been sickened in a measure by "the jargon of recent days about the 'Absolute,' and all the other hypostalized adjectives, the initial letters of the names of which are generally printed in capital letters, just as you give a grenadier a bear-skin cap to make him look more formidable than he is by nature." For the purposes of truth and real progress in the science of understanding ourselves, there has been far too much of this disposition prevalent. But it does not follow from this that there is no merit in the doctrine which advocates the supremacy of mind, and proposes our consciousness as the ultimate test to which the evidence of all things must be submitted.

"The immortal mind, superior to his fate,
Amid the outrage of external things,
Firm as the solid base of this great world,
Rests on his own foundation."

In other directions, and most especially with regard to the external aspect of the material world, there may appear many evidences or indications of permanency and reality; but a little careful observation will very soon convince us that the reality is in ourselves, and not in the material world. It is mind makes up the reality of our consciousness, and it is consciousness that makes up the reality of our existence. Outside of this we are nothing, simply because there is nothing of which we can predicate human existence but of these two fundamental facts.

And here we come to that direct point for

which I have designed my preceding argument, viz.: the essential spirituality of man and the irreversible relationship existing between mind as manifested through consciousness and the great "unknown" by which we are surrounded, and by virtue of which the mind at times, reacting as it were against the usurpations of secondary causation, throws itself into the arms of infinitude, endeavoring even in the iron grasp of nature to feel the immediate embrace of God.

Immersed as the majority of us are in animalism and sordid appetites, it may be true that to most of us these experiences are exceedingly "few and far between;" but this by no means denies the fact that there is an aspect to our consciousness which, besides impressing every thoughtful mind with a sense of its profound significance, also enables us to rise to that sphere of contemplative religion wherein the pure Theism of Christianity appears to us in all its fullness and beauty. During the every-day bustle and confusion of a busy life, there are many things which suppress "the still, small voice" within us; but in our silent moments, when the mind regains its thoughtful equilibrium, and the tide of meditation fairly has set in upon us, then in every earnestly reflective mind there comes up from our consciousness a demand which repu-

diates the old mechanical Deism, and in its stead cries out for a sympathizing and living God. In short, so deeply suggestive is our consciousness, and so obviously clear its indications, that it is impossible for any one to *feel that he is a man* and not in some measure find himself overshadowed by that feeling of awe and reverence which induced Immanuel Kant to exclaim: "Two things fill me with awe: the starry heavens and the sense of moral responsibility in man."

In this connection it matters not how far a certain class of philosophers may endeavor to persuade us that the importance which we attach to consciousness is but an idle phantasy. "Could the haunting problems of Being be silenced, while we only listened to the flow and caught the rythm of phenomena," or could the atmosphere of our thoughts be reduced to the oppressive temperature of a dead materialism, then, and not until then, may we cease to listen to that sentiment which so mysteriously allies us to the visible and invisible worlds; and which the more closely we trace its operation the more clearly it brings us to that grand definition of Socrates: "The man is that which uses the body; now, does anything use the body but the mind? Is not the mind, therefore, the man?" Or, again, to answer with Alcibiades: "The mind alone."

W H E N ?

BY SUSAN COOLIDGE.

If I were told that I must die to-morrow,
That the next sun
Which sinks should bear me past all fear and sorrow
For any one,
All the fight fought, all the short journey through,
What should I do?

I do not think that I should shrink or falter,
But just go on
Doing my work, nor change nor seek to alter
Aught that is gone;
But rise and move and love and smile and pray
For one more day.

And, lying down at night for a last sleeping,
Say in that ear
Which hearkens ever: "Lord, within thy keeping
How should I fear?
And when to-morrow brings Thee nearer still,
Do Thou thy will."

I might not sleep for awe, but peaceful, tender
My soul would lie
All the night long; and when the morning splendor
Flushed o'er the sky,
I think that I could smile—could calmly say,
"It is His day."

But if a wondrous hand from the blue yonder
Held out a scroll,
On which my life was writ, and I with wonder
Beheld unroll
To a long century's end its mystic clue,
What should I do?

What could I do, oh! blessed Guide and Master,
Other than this:
Still to go on as now, not slower, faster,
Nor fear to miss
The road, although so very long it be,
While led by Thee?

Step after step, feeling thee close beside me,
Although unseen, [hide Thee,
Through thorns, through flowers, whether the tempest
Or heavens serene,
Assured thy faithfulness can not betray,
Thy love decay.

I may not know, my God, no hand revealeth,
Thy counsels wise;
Along the path a deepening shadow stoleth,
No voice replies
To all my questioning thought, the time to tell,
And it is well.

Let me keep on, abiding and unfearing,
 Thy will always,
 Through a long century's ripening fruition,
 Or a short day's.
 Thou can'st not come too soon; and I can wait
 If thou come late.

JOY IN THE PRISON.

[Under this heading an Ohio paper makes this statement: Rev. O. H. Newton, chaplain of the Ohio penitentiary, reports that about 360 of the convicts have professed religion since the formation of the prison church, a year and a half ago. Of these about a hundred have been discharged, and have joined churches outside, and are living consistent Christian lives. Nearly five hundred of the inmates attend the prayer meetings, and about four hundred the Sabbath-school in the prison.]

IS it possible! What business have these State prison convicts to become pious? Were they sent to prison to pray, or was it to be punished? Then why not make them feel the iron rod? Why show them favor? Can a criminal repent? Can the majesty of the civil law be satisfied in this joy-ous way? Why, Mr. Newton, you completely nullify the principle taught in the old Jewish record, where it demands an eye for an eye. The next thing we may expect to hear of will be great religious revivals in all our prisons. Then it may be the murderer Stokes will become penitent, seek for pardon, "get religion," and be let loose on the world! *Dreadful! dreadful!* Then what's the use of prisons, we should like to ask? Why not build churches, school-houses, and such like, instead? What *are* we coming to, when preachers pray with prisoners, instead of flogging them? We wonder if it would make any difference, as to crime, if there was less "drink"? Aye? Then why not organize a temperance society in every drinking saloon, and so lessen the causes of crime? It is said, and statistics prove, that seventy-five per cent. of all the men now incarcerated in our State prisons came to their crimes through strong drink! Think of this, you liquor dealers, you liquor distillers; you who put the fatal cup to your neighbor's lips. But we stray from our subject, which is, Religion in the Prison. God bless the good efforts of good men who are moved to work in this much neglected human vineyard! If any class of mortals on earth need the inspiring and encouraging influences of Divine love, it is this class of unfortunates.

There are many poor, ignorant, unbalanced, incautious, impetuous, and—if you will—evil-disposed persons afloat in a city, and there are others, so badly warped, socially; intellect-

ually, and morally, that they are on the verge of insanity. The slightest disturbance de-thrones their reason, and over they topple. The asylum is the place for this class, as the prison is the place for the criminal. Such should be placed in restraint, and treated according to his condition and requirements, both for his own good and for the good of society. It is a short but heedless course to send one to death, or to a *worse* condition, by placing him under brutal treatment in prison or asylum.

The Ohio man is on the right track, he uses such agencies as God has placed at his disposal; grace works through means, and real conversions are the results. Think you, good reader, that if you or I were placed in a cold prison cell, that we would become altogether saintly, when no kind or encouraging word were ever spoken to us?

When we consider that the best men are liable to slip, yea do actually slip and yield to temptations sometimes, it ought to teach us charity, and induce us to help the weak, and instead of making them worse, to try to make them better. God bless every effort made in behalf of poor sinners, and especially *criminal* sinners!

FORGIVENESS.—Here are paragraphs from an exchange, which manifest the right spirit:

DECORATION OF GRAVES.

The Soldiers' Rest was then cleared, and the soldiers' orphans marched in, and after the band had played a dirge, the beautiful ceremony of decorating the graves with flowers and evergreens was performed by the orphans, assisted by the members of the Grand Army of the Republic. At every head-board was a small flag, and the graves showed that they had been properly cared for. There was a great abundance of flowers, and not a single grave was forgotten in the decoration.

DECORATION OF REBEL GRAVES.

Perhaps one of the most touching incidents of the day was at the conclusion of the decoration of Union graves, when Governor Washburn, in a few eloquent remarks, called upon the veteran soldiers to follow him and decorate the graves of the Confederate dead, about 150 of whom died in prison here, and are buried in Forest Hill Cemetery. It was an impressive and suggestive scene, and one not soon to be forgotten, to see the Governor and the old veterans strewing with flowers the graves of their late enemies.

[Was not this noble, manly? Heathenish religions inculcate the principle of revenge, but Christianity teaches the doctrine of penitence and pardon. *Forgiveness* is godly; revenge is ungodly.]

Physiognomy, or Signs of Character.

*Of the soul, the body form doth take,
For soul is form, and doth the body make.—Spenser.*

EXPRESSION—ITS ANATOMY AND PHILOSOPHY.

BY SIR CHARLES BELL, K.H.

[CONCLUSION.]

ESSAY X.

USES OF ANATOMY TO THE PAINTER—FAULTS INTO WHICH ARTISTS MAY BE BETRAYED IN STUDYING THE ANTIQUE, OR IN DRAWING FROM THE ACADEMY FIGURE—ANATOMY AS CONDUCTING TO TRUTH OF EXPRESSION AND OF CHARACTER.

IT is interesting, in a very high degree, to mark the traits of emotion, and to compare them with the anatomical structure; and amid the severer studies of anatomy, as connected with health and disease, I have been able, without departing too far from professional pursuits and duties, to pass many pleasant hours in observing and investigating the anatomy of expression. In the prosecution of anatomy, we never know to what results it may lead. The observations I have made on the nervous system might be traced to investigations on the present subject. I saw that the whole frame is affected sympathetically with expression in the countenance; and it was in trying to explain that sympathy that I was led to ascertain that there exists in the body a distinct system of nerves, the office of which is to influence the muscles in respiration, in speech, and in expression.

The study of the animal frame, as it is affected by emotion and passion, is nearly related to philosophy, and is a subject of great difficulty and delicacy. The question is often discussed, of what use is anatomy to the painter? The study of anatomy has been objected to by some persons of pure taste, from the belief that it leads to the representation of the lineaments of death more than of life, or to monstrous exaggerations of the forms. So far this is the case, when an artist, without natural talent or right feeling, will rather exhibit the bones or muscles than the fine forms of health and vigor. But we return to the question, what are the advantages to be gained from this study by the art-

ist? As we may define anatomy to be the examination of that structure by which the mind expresses emotion, and through which the emotions are controlled and modified, it introduces us to the knowledge of the relations and mutual influences which exist between the mind and the body. To the painter, therefore, the study is necessarily one of great importance; it does not teach him to use his pencil, but it teaches him to observe nature, to see forms in their minute varieties, which, but for the principles here elucidated, would pass unnoticed—to catch expressions so evanescent that they must escape him, did he not know their sources. It is this reducing of things to their principles which elevates his art into a connection with philosophy, and which gives it the character of a liberal art.

By anatomy, in its relation to the arts of design, I understand not merely the study of the individual and dissected muscles of the face or body or limbs, but the observation of all the characteristic varieties which distinguish the frame of the body or countenance. A knowledge of the peculiarities of infancy, youth, or age, of sickness or robust health, or of the contrasts between manly and muscular strength and feminine delicacy, or of the appearances which pain or death present, belongs to its province as much as the study of the muscles of the face when affected in emotion. Viewed in this comprehensive light, anatomy forms a science not only of great interest, but one which will be sure to give the artist a true spirit of observation, teach him to distinguish what is essential to just expression, and direct his attention to appearances on which the effect and force, as well as the delicacy of his delineations, will be found to depend.

Among the errors into which a young art-

ist is most likely to be seduced, there are two against which the study of anatomy seems well calculated to guard him. The one is a blind and indiscriminate imitation of the antique; the other, an idea that he will find in the academy figure a sure guide for delineating the natural and true anatomy of the living body. He who makes imitation of the antique the beginning and end of his studies, instead of adopting it as a corrective of his taste, will be apt to fall into a tame and lifeless style; and, in pursuing ideal beauty, will be in danger of renouncing truth of expression and of character. Nay, I suspect that many painters have copied casts of the antique for years without perfectly understanding what they should imitate, or even perceiving the necessity of previously studying the design of the artist, or the peculiarities of his mode of composition. Into this fault, one who is learned in the science and anatomy of painting can never fall. But he who has not compared the natural with the antique head, nor understood the characteristic differences, nor studied the principle on which the ancient artists composed, may be betrayed into the grossest misconceptions, by too implicitly following their models. In painting a hero, for example, on whom the Greek artist would have bestowed a character of strength and grandeur, by bold anatomy and expression, he may be following the ideal form of a deity in which the sculptor had studiously divested his model of all that might seem to pertain to humanity. As I have before remarked, the ancient sculptor, in accordance with the mythology of his country and the spirit of her poetry, studied to show the attributes of divinity in the repose of the figure, without any indication of muscles or veins, and by a face stamped with the mild serenity of a being superior to human passion; thus shadowing out a state of existence, in which the will possessed freedom and activity, without the accompanying exertion of the bodily frame. But those ideal forms are scarcely ever to be transferred to the representation of the human body; and a modern artist who follows indiscriminately such models, misapplies the noblest lessons of his art.

Independently of the ideal form of divinity, there are also some peculiarities in the

nature of the ancient sculpture which ought to be well considered by the student in modern painting.

In the infancy of their art, sculptors did not venture to give to their figures either animation or character; they did not even open their eyelids or raise the arm from the side. A stillness and simplicity of composition were thus the characteristics of ancient sculpture; and we are told that Pericles, even in the best period of Grecian art, was anxious that his pupils should preserve this feature



HEAD.

of the early ages in all their works as essential to grandeur. The pleasure of being carried back to old times seems to be a part of our nature, or, at least, of the cultivated mind. So Pliny speaks of retaining in everything about a villa its ancient simplicity. It is observed accordingly, that among the excellences which distinguish the Greek artists, the first and most admirable is that gravity of style—that sedate grandeur of expression and prevailing tranquillity of soul which still appear under the most terrible agitation and passion. Upon this chaste model the taste in sculpture was formed in the better ages of Greece and Rome, and its influence has extended to modern times.

Unfortunately this style of composition has been taken as an additional authority for rejecting powerful expression and character

even from the canvas. But we must never forget the distinction between sculpture and painting. The statuary, indeed, as well as the painter, has often to represent what is not consistent with beauty; while both must sometimes preserve an indefiniteness, and soften all the harsher, though strictly natural, lines of expression. If the statues of Michael Angelo and John of Bologna were as familiar to us as the casts of the antique, they would probably modify the prevailing opinions on this subject. Still, there is an essential difference between the principle of composition in painting and in sculpture.

In the works of ancient artists we see a perpetual effort to exalt their productions above the commonness of nature. They studied a grand and general effect, avoiding the representation of minuteness or sharpness of feature, and of convulsions or distortions, however strictly natural; and, indeed, it is scarcely consistent with the character of a statue to represent the transitory effects of violent passion. The sculptor must exercise his genius on the more sublime and permanent feelings, as characterized in the countenance and figure; and much of the difficulty of his art consists in preventing the repose which ought to be preserved in the attitude and expression, from extinguishing all character and degenerating into tameness and indifference.

It is repose, and not absence of expression, that is to be aimed at. The flashes of passion do not assort with the material, while the languor and the gloom of the features in grief are quite consistent with it. The slaves and mutes on the pedestal of a monumental statue may contribute to the effect; they are mere accessories—as the frame to the picture. But this principle does not apply to the painter; to transfer to his art the rules of composition which flow from the study of ancient sculpture would endanger all in which it is most excellent. As his materials do not permit a close imitation of the actual forms of nature, a stronger and more natural character is to be adopted on the canvas than is proper to a statue. It is true that he may often maintain much of the same gravity of style as the statuary, and that in such compositions there may be a certain august majesty; some subjects require this, and others

only admit of it, provided the tone and principle of composition be preserved, and the coloring be low and somber. In general, however, this is neither necessary nor perhaps suitable to a picture; and it may be at least laid down, that where there is bold light and vivid coloring, there should also be strong expression and bold characteristic drawing. A painting with high finishing and bright coloring demands minute expression, because the same circumstances which display the natural color, bring out a clear disclosure of the parts and a sharpness of expression in the features.

Thus the painter must study the traits of human expression. The noblest aim of painting is unquestionably to affect the mind, which can only be done by the representation of sentiment and passion—of emotion as indicated by the figure and the countenance. But if it be contended that an imposing stillness and tranquillity must pervade the higher subjects of painting, I venture to affirm that it is a tranquillity which he can never attain who is not capable of representing all the violence and agitation of passion. It is not such repose as the artist who has despised or neglected natural character may be able to represent, but such as he alone can conceive and execute who has studied all the variety of expression, and learned the anatomy of the face and limbs in their most violent action. Nay, tranquillity or repose, in the strict sense of the words, can only be truly represented by one who can, with equal facility, give energy to the features and figure; for in rest there must be character, and that character will best be expressed by him who has studied the effect of the action of the muscles. It ought also to be remembered that repose and agitation must ever greatly depend on contrast and opposition. There are few grand subjects in history or mythology in which the tranquillity and higher beauty of expression in the main figure does not borrow some aid from the contrast of the harsher features, more marked characters, and more passionate gestures of the surrounding groups.

Perhaps I have sufficiently pointed out how dangerous it is for one who aims at excelling as a painter to imitate too closely and indiscriminately the productions of ancient sculp-

ture. But it is natural for the student to believe that the study of the academy figure may serve as a guard against all such danger, and afford him a sure criterion for judging of the anatomy of his figures.

Where is the artist to find the principles of his art when he desires to express mental suffering under all those influences which form the subjects of design in the higher departments of art, and especially in historical painting—is he to grimace at himself in a mirror?—then he falls into caricature; is he to study the expression of the actor?—then he represents what is fantastic and theatrical. For what may be correct representation on the stage is not correct in painting, any more than it would be correct for the tragedian to display on the stage those traits of expression with which the physician is alone supposed to be familiar. Powers of observation, cultivated by good taste, lead us to distinguish what is appropriate. The physician in studying symptoms, the actor in personifying suffering, the painter in representing it, or the statuary in embodying it in marble, are observers of nature; but each sees her differently, and with a feeling influenced by his pursuit.

The study of the academy figure is, undoubtedly, essential; but unless followed with some regard to science it necessarily leads to error. In the first place, it can give no aid in reference to the countenance. Here the lessons of anatomy, associated with the descriptions of the great poets and the study of the works of eminent painters and sculptors, afford the only resource. But even for attaining a correct knowledge of the body and limbs, the academy figure is far from being an infallible guide. The display of muscular action in the human figure is but momentary, and can not be retained and fixed for the imitation of the artist. The effect produced upon the surface of the body and limbs by the action of the muscles—the swelling and receding of the fleshy parts, and that starting out of the sinews or tendons, which accompany exertion or change of posture, can not be observed with sufficient accuracy unless the artist is able to class the muscles engaged in the action; and he requires some other guide to enable him to recollect these varying forms than that

which is afforded by a transitory view of them.

When the academy figure first strips himself, there is a symmetry and accordance in all the limbs; but when screwed up into a posture, they indicate constraint and want of balance. It can not be supposed that when a man has the support of ropes to preserve him in a position of exertion, the same action of muscles can be displayed as if the limbs were supported by their own efforts; hence, in all academy drawings, we may perceive something wrong, from the ropes not being represented along with the figure. In natural action there is a consent and symmetry in every part. When a man clenches his fist in passion, the other arm does not lie in elegant relaxation; when the face is stern and vindictive, there is energy in the whole frame: when a man rises from his seat in impassioned gesture, a certain tension and straining pervades every limb and feature. This universal state of the body it is difficult to excite in those who are accustomed to sit to painters; they watch his eye, and where they see him intent, they exert the muscles. The painter, therefore, can not trust to the man throwing himself into a natural posture; he must direct him, and be himself able to catch, as it were, intuitively, what is natural, and reject what is constrained. Besides, those soldiers and mechanics who are employed as academy figures are often awkward and unwieldy; hard labor or the stiff habits of military training have impaired the natural and easy motion of their joints.

Until the artist has gained a perfect knowledge of the muscles, and is able to represent them in action without losing the general balance of the figure, he is apt to produce an appearance like spasm or cramp in the limbs, from one part being in action while the other is in repose. For it is always to be remembered, that whether the body be alive or dead, whether the limbs be in action or relaxed in sleep, a uniform character must pervade the composition. Whether the gently undulating line of relaxed muscle be the prevailing outline, or the parts be large and strong, and the muscles prominent, bold, and turgid, there must be perfect accordance, or there will be no truth of expression.

I think that in the sketches, and even in

the finished paintings, of some artists, I have observed the effect of continuing to draw from the model or from the naked figure, without due attention to the regulated action of the muscles. I have seen paintings where the grouping was excellent and the proportions exact, yet the figures stood in attitudes when they were meant to be in action; they were fixed as statues, and communicated to the spectator no idea of exertion or of motion. This sometimes proceeds, I have no doubt, from a long-continued contemplation of the antique, but more frequently from drawing after the still and spiritless academy figure. The knowledge of anatomy is necessary to correct this; but chiefly a familiar acquaintance with the classification of the muscles and the peculiarities and effect of their action.

The true use of the living figure is this: after the artist has studied the structure of the bones and the groupings of the muscles, he should observe attentively the play of the muscles and tendons when the body is thrown into action and attitudes of violent exertion; he should especially mark their changes during the striking out of the limbs. By such a course of observation he will soon be able to distinguish between posture and action, and to avoid that tameness which results from neglecting the effects of the alternate contraction and relaxation of the muscles. And with this view, after having learned to draw the figure, the painter would do well to make the model go through the exercise of pitching the bar, or throwing, or striking. He will then find that it is chiefly when straining in a fixed posture that there is a general tension and equal prominence of the muscles; and that in the free actions of the limbs a few muscles only swell out, while their opponents are relaxed and flattened. He will not, perhaps, be able at once to catch the character of muscular expression and commit it to paper, but having an accurate knowledge of the muscles, according to their uses and the effect of each action in calling particular sets of them into activity, knowing to what points his observation should be applied, and how his preconceived notions are to be corrected by the actual appearance of the limb, each succeeding exhibition of muscular exertion will advance his progress

in the delineation of the figure. Hence it may well be said, that anatomy is the true basis of the arts of design; and it will infallibly lead those to perfection who, favored with genius, can combine truth and simplicity with the higher graces and charms of the art. It bestows on the painter a minuteness and readiness of observation which he can not otherwise attain; and I am persuaded that while it enables him to give vigor to the whole form, it teaches him to represent niceties of expression which would otherwise pass unnoticed.

Even in drawing from a particular model the artist versed in anatomy has a great superiority. When I have seen one unacquainted with the internal structure drawing from the naked figure or from a statue, I have remarked the difficulty which he experienced in showing the course of a swelling muscle or the slight depressions and convexities about a joint; and this difficulty might be traced to his ignorance of the relations and actions of the muscles. The same perplexity he often feels in drawing the knobbed ends of the bones or the insertions of the tendons at the articulations; for these parts being covered over by the integuments and cushions of fat of variable thickness, and sheathed in membranes, are but faintly marked on the surface. The delicate and less definite indications of the anatomy, though easily traced by one acquainted with the structure of the limb, appear to the uninformed only unmeaning variations in the outline; he has no means of judging of their importance, and he is subject to continual mistakes in attempting to imitate them.

Suppose that a young artist, not previously grounded in anatomy, is about to sketch a figure or a limb, his execution will be feeble, and he will commit many errors if he endeavors merely to copy what is placed before him—to transcribe, as it were, a language which he does not understand. He sees an undulating surface, with the bones and processes of the joints faintly marked; he neglects the peculiar swelling of the muscles, to which he should give force, as implying motion; he makes roundings merely; he is incapable of representing the elegant curved outline of beauty with decision and accuracy, and of preserving, at the same time, the characters

of living action. Drawing what he does not understand, he falls into tameness or deviates into caricature.

But with a knowledge of anatomy, if he attempt the same task, his acquaintance with the skeleton will enable him to make his first outline of the figure with truth and ease, and preserve its various proportions; and the study of the muscles will enable him to give force to the muscular parts, and to represent the joints accurately without exaggeration.

It is, however, in composing much more than in copying that this knowledge is truly useful. Without it, all the original efforts of genius must be checked and repressed. Every change of posture is accompanied with muscular action, and in proportion to the painter's ignorance of the cause of those changes, all his designs will be cramped and restrained. Leonardo da Vinci gives formally, as a precept, what is self-evident to an anatomist: "In naked figures, those members must show their muscles most distinctly and boldly upon which the greatest stress is laid, in comparison with which the rest must appear enervate." "Remember, further, to make the muscles most visible on that side of any member which it puts forward to action." Such rules and precepts are rather the result of anatomical study than useful to one ignorant of the subject, in pointing out how effect is to be produced. It is not by following such recommendations that the end is to be accomplished, but by enriching the mind with frequent observation of the changes which are displayed by action, and forming rules for their representation. For example, in vigorous action there is a general tension of the whole frame; but in order to produce a particular motion, a certain class of muscles is brought into stronger action than the rest; and the nature of the motion is expressed by marking the arrangement of the muscles. If a man be merely pointing upward, a graceful simplicity may be all that the painter can attain or should attempt; but if he is bringing down a heavy sword to make a blow, the muscles will start into strong exertion, and the idea of mighty action will be conveyed by representing those swelling muscles of the chest which pull down the arm and give the sweep to the whole body. Thus, to compose with truth and

force, it is necessary that the painter should not only know the place and form of the bones and muscles, but that he should also have an accurate conception of the classing of the muscles in action.*

Perhaps I may best convey my idea of the advantage to be derived from this study by contrasting two young artists drawing from a figure; the one trusting to his untutored genius, the other assisted by a knowledge of anatomy. The first is seen copying bit by bit, and measuring from point to point; and the effect, after much labor, is an accurate outline. The other seizes the chief characters of the attitude with facility, because his knowledge of the skeleton has enabled him to balance the trunk upon the limbs and give the contours boldly. The turn of the limbs, the masses of muscle, and the general forms of the joints, are touched with a slight but accurate hand, and the spirit and life of the original are recognized at once. Even in the early stage of his drawing, while his rival is copying parts, he will present the foundation of a correct and spirited sketch; and as he can convey the general idea by a few lines, he also excels in finishing the minute parts.

* "Socrates one day paid a visit to Clito, the statuary, and, in the course of conversation, said to him, 'We all know, Clito, that you execute a variety of figures; some in the attitude of the race, and others in the several exercises of wrestling, of pugilism, and of the pancratium; but with regard to the quality which particularly captivates the soul of the spectator—I mean their correct resemblance to the life—how is this property wrought into your productions?' As Clito hesitated for a reply, Socrates quickly rejoins, 'Is it not by endeavoring to imitate the configuration of the bodies of those who are actually engaged in those exertions of skill and activity that you succeed?' 'Without doubt,' said the artist. 'Well, then,' resumed the philosopher, 'you study, under the various gestures and attitudes of the living body, what parts are drawn up out of their natural situation, or carried in a contrary direction below it. Some which undergo compression, others an unnatural elevation; some which are thrown into a state of extension, others which become relaxed; all this you imitate, and hence you produce that fidelity, that accuracy, which we admire.' The artist acquiesced in the remark. 'And the expression of the passions, again—how great a pleasure does this produce to the spectator?' 'Surely,' replied Clito. 'Thus those who are in the actual conflict of the battle, are they not to be represented as bearing menaces in their eyes, while satisfaction and joy should sit upon the countenances of the victorious?' 'Unquestionably.' 'It is then equally the business of the statuary to transfuse into his productions the workings and emotions of the mind.'"—*XENOPHON: Memorabilia*, Lib. III. cap. x. p. 6.

But this superiority is still better shown if the model be removed from these two young painters, and they draw the figure from recollection; or if, keeping the model before them in its original posture, they are required to alter the attitude. Let us take, for example, the fighting gladiator. Instead of a young warrior pushing on with great energy, let their task be to represent him receiving the blow of his antagonist, which forces down his shield upon his breast, or brings him with his knee to the ground, as it is beautifully represented on some medals. Can we doubt for a moment which will excel? The one will copy from memory his original drawing, or with great difficulty twist the erect limbs of the statue into a couching posture, while the other will gain by his greater freedom. Retaining the general air, like one who had understood what he copied, he is aware that a new class of muscles comes into action, while those formerly in exertion are relaxed; he knows that the bending of the limbs increases their measurements; he knows how to represent the joints in their new postures; in short, he gives to his figure energy and effect.

It is a mistake to suppose that, because in many of the finest pictures the anatomy is but faintly indicated, the study may not be necessary to a painter. Even that which, in the finished picture, is intended merely to give the idea of muscular exertion, should have its foundation laid in the sketch, by a correct and strong drawing of the full action. It is true that the sketch is too often a mere indication of the painter's design, intended to be worked up to the truth of representation as he transfers it to the canvas—that the outlines of the figures are rather shadowy forms, undefined in their minute parts, than studies of anatomical expression or as guides in the subsequent labor. And, perhaps, it is for this reason that there have been many painters, whose sketches all admire, but whose finished paintings fall short of public expectation. But a sketch which is without vigor, and in which the anatomy has not been defined, is a bad foundation for a good picture; and even a little exaggeration in this respect is not only agreeable, but highly useful. The anatomy should be strongly marked in the original design;

and from the dead coloring to the finishing, its harshness and ruggedness should be gradually softened into the modesty of nature.

The character of a sketch is spirit and life; the finished painting must combine smoothness and accuracy. That which was a harsh outline in the sketch, or the strong marking of a swelling muscle, or the crossing of a vein, will be indicated in the finished composition, perhaps only by a tinge of color. The anatomy of the finished picture will always be most successful, and even most delicate, where the painter has a clear conception of the course and swelling of each muscle and vein which enters into the delineation of the action.

While artists neglect the study of anatomy, as connected with character and expression in painting, they never can attain the "vantage ground" of their profession. Perhaps it is also to be feared that while only a few artists are versed in this science, they will be apt to caricature nature; they are learned above their rivals; it is their forte, and they are solicitous to display it. But were the study of anatomy more general, the same spirit and love of originality which tempt them to a style bordering on deformity, would make those very men seek distinction by combining grace and other qualities of fine painting with truth and expression.

It is not enough, however, that the painter should improve himself in the knowledge of anatomy; public attention must also be directed to its importance. For as necessity precedes invention in the origin of the arts, so must general good taste precede or accompany their improvement. The mere conviction in the mind of the painter, that anatomy is essential to the perfection of his art, will seldom be sufficient to insure his application to a very difficult and somewhat repulsive study. The knowledge and opinion of the public must force him to the task, and encourage his labor by the assurance of its merited reward.*

* It may be opportune for the publisher of the JOURNAL to add here that the reader can have the *Essays on "Expression,"* now completed, in one neat volume, with all the illustrations, which will be ready in a few weeks.

SOME FAMILIAR VIEWS OF SOCIETY—No. 1.

"**V**ARIETY is the spice of life," is, indeed, a trite remark, and heard often enough, but perhaps we do not always think that the variety referred to has more relation to things external to man, to the qualities and peculiar features of inanimate objects which surround him. We speak of variety of occupation or avocation, variety of scene, of pleasures, of social life; and generally men accept such variety for the good reason that there is much mental and physiological benefit derivable from it. Man is constituted in such a way that he possesses many sides. Instead of having one positive form of character, he has many qualities or ingredients combined in himself, all of which make up his character; and, according to occasion or circumstances, he exhibits peculiarities of disposition, phases of feeling, or sentiment, or emotion. Perhaps it would not be straining the point to say, man is scarcely twice alike; scarcely can he claim to have had at two different times precisely the same state of mind in all respects. We could hardly point to two periods in our personal experience when the incidental circumstances were precisely similar. Probably no one can. Much of the variety in human life has for the observer elements of pleasure and elements of pain.

As a general thing, however, we are disposed to look upon marked contrasts, like the one in

impression which we will receive will be that of mirth. The comparison which will be instinctively drawn will prove too much for the equanimity of most people, and the lean, sallow, dyspeptic must bear the brunt of the



FIG. 2.—LEARNED AND IGNORANT.

humor. The fat man is usually a jolly, good fellow, and society is disposed to congratulate him on the score of his rotundity, rather than find occasion to twit him for his apparent appreciation of the good things of the table and an easy mode of life; while the "lean and hungry" visage which usually accompanies Mr. Lankness, has not much consolation. The general opinion is, with regard to such a man, that he does not look upon the world with enough good-hearted feeling to make use of it in a cordial, earnest, benevolent spirit; that he is more disposed to censure, to criticise, and find fault with others, and so, becoming soured by the retroaction of his own acidity, he approximates the mere interrogation point which he so closely resembles.

On first noticing the contrast exhibited in the second engraving, we are led to exclaim: Oh, for the improving influences of well-diffused educational instrumentalities! We regret to think that the masses of the people are lying in such an abject mental condition; that, notwithstanding all that has been done, all the force which wise and good men have put forth for the benefit of nations, have resulted for the advantage of so few. The civilization which we boast of is, to be sure, grand and glorious in many respects, but its grandeur and glory are illustrated by the learning and shining tal-



FIG. 1.—STOUT AND THIN.

the engraving for instance, as affording no little food for amusement. Bring together the man of ruddy visage and large, rounded body in juxtaposition with a man of tall, slim frame, with lean, lantern-jawed phiz, and the first

ents of men whose names are few enough to be household words. When we descend among the masses of the people, and find millions languishing in ignorance and reveling in vice, chiefly because they have not been instructed in better things, because their consciences have not been illumined by the rays of a higher morality, we feel that our civilization has been shorn of much of its glory and its credit. Between the elderly, well-organized, and well-educated minister and the couple that has waited upon him for the purpose of being unit-

ed in the bonds of wedlock, there is a marked difference, and yet a difference by no means exaggerated. While benevolence, intellectual discernment, consistency, high religious intuitions mark the character of the one, the others are distinguished chiefly for an absence of these lofty qualities, and a predominance of propensity, passion, and animality. This sketch of the artist points a moral in a way most striking. It is a strong sermon in itself, and needs no commentary besides the thoughts awakened in the mind of any intelligent reader.

Department of Our Social Relations.

Domestic happiness, thou only bliss
Of paradise that has survived the fall!
Thou art the nurse of virtue.

AN IDEAL PORTRAIT.

TOLD BY THE ARTIST.

I HAD been reading Taine "On Intelligence," and was much impressed by a description given of "an English painter whose rapidity of execution was marvelous, and who explained his mode of work in this way: 'When a sitter came, I looked at him attentively for half an hour, sketching, from time to time, on the canvas. I wanted no more—I put away my canvas, and took another sitter. When I wished to resume my first portrait, *I took the man and sat him in the chair*, where I saw him as distinctly as if he had been before me in his own proper person—I may almost say more vividly.

"I looked from time to time at the imaginary figure, then worked with my pencil, then referred to the countenance, and so on, just as I should have done had the sitter been there—*when I looked at the chair* I saw the man.

"Gradually I began to lose the distinction between the imaginary figure and the real person; and sometimes disputed with sitters that they had been with me the day before. At last I was sure it; and then—all is confusion. I lost my senses, and was thirty years in an asylum.'

"When he left the asylum he had still the power of painting a portrait from his internal image of the model, but was persuaded not to work, for fear of a return of the madness."

I mentioned the subject to my friend Cornelia, whose wonderful success in painting posthumous portraits is sufficient evidence that she thoroughly understands the reduction of images. The faces that look out from her canvas are human faces, about whom there is no suspicion of oil or pigment, and they possess such an amount of magnetic influence that you are haunted by their memory long after you have turned your back upon them.

"I always paint in that way," said Cornelia, referring to the English artist; and I, who knew how little material she required to make a portrait, was quite ready to believe the assertion.

"Did I never tell you of my ideal portrait?"

"No;" and I put myself in a listening attitude.

"It was for a Mr. Clinton, who had lost his first wife and was married to his second, a relative of Kate's, when he came to me.

"Cornelia," said he, 'do you suppose you could paint Kate's picture? There is nothing in the house to give you any idea of her, but I must have a portrait of her if such a thing is possible. Would a description do? O you must paint her!' and the anxiety of the man was enough to determine the undertaking.

"He began telling me how she looked, the color of her eyes and hair; and out of these brief and unsatisfactory portions I mentally created an ideal.

"'I'll do it!' I exclaimed.

"'O Cornelia! can you?'

"'Yes; I'm determined! I'll take all my traps up to your house, and I won't leave there until the picture is finished!' He believed I could do it, and his faith in me was a sort of inspiration. Well, I was installed in the north room, where was the light I wanted, and began sketching from descriptions given of Kate by both Mr. and Mrs. Clinton, who were not permitted to look upon the canvas.

"You don't know how much assistance I derive, in the painting of posthumous portraits, from one who has good descriptive powers.

"People are so different in that respect; some can't tell you anything at all, even of their best friends. What I want are the general characteristics, so that I can get myself in sympathy with the subject. I had given myself a week in which to finish Kate's portrait, and was as confident of my success as if I had every advantage toward securing the most favorable result.

"I was busy at my work in the parlor, when the door-bell rang and a young gentleman entered my temporary studio, previous to being invited into Mrs. Clinton's sitting-room. As soon as I looked at him, I felt there was an expression on his face that I wanted to put in Kate's. It was the only thing that had bothered me. I did not know the young man or what relation he bore to the family,

but from the moment of seeing him I worked more rapidly than I had done hitherto. He had supplied the 'missing link' in the psychological chain.

"That evening I inquired who was the visitor who had called during the day. 'That was Mr. Weller,' said Mrs. Clinton; 'Kate's brother!' The mystery was explained, and you may imagine how delighted I was. I said nothing, however, but at the end of the seven days, I called Mr. and Mrs. Clinton to inspect my work. 'My God! it is Kate!' said the former, tear after tear chasing down his cheek, and giving more eloquent testimony to the truthfulness of the likeness. Mrs. Clinton was speechless with astonishment, and both seemed to feel as if the grave had given up its dead."

It is a wonderful thing, this creative genius; and as I looked at my little friend, so liberally endowed, I marveled not at the attenuated frame, the spiritual face with the preponderant brow, and the soulful eloquence of the eye, all of which bespoke an intimate acquaintance with things that are unseen by ordinary observers.

I remembered the profile plaster cast she showed me, in the beginning of our acquaintance, as the only guide she had to the painting of the first portrait she attempted. Her very boldness insures success; and should any of my beloved ones be snatched from me, leaving no shadow, visible to the eyes, of what they once were, I should want no other person to call them back from the silent land and give them place among us, than she who puts her soul in her work, and verily restoreth the dead to life.

THE PRETTY MAN, AND THE DOLL-FACED WOMAN.

BY ANNA CLEAVES.

THERE is nothing more contemptible, in my estimation, than an effeminate-voiced, baby-featured, meek-eyed pretty man. Such a man always reminds me of soft bee's-wax, ready to be molded into any form.

I pity the woman that marries a man of this stamp, especially if she be plain-looking; for he is so much in love with himself that, depend upon it, he has none of the precious article to bestow upon others. Be-

sides, he is universally selfish; everything must be appropriated to his majesty's service; he will take good care that his wants are supplied, and consider it a generous act to leave you to do the same for yourself.

The word conceited does not begin to express the vanity he manages to cram into his empty head; he imagines that everybody admires him, and that all the young ladies in his circle of acquaintance are dead in love

with him. The dear souls! how can they withstand his charms!

When he speaks, everybody is expected to listen and pay deference to him; for he fancies that he is saying smarter things than anybody else ever dreamed of.

The pretty man is always dressed in the height of fashion, no matter if it be at the expense of his wife's slender, personal income. He is sure of non-exposure from this quarter, and will abuse her confidence and endurance without a twinge of conscience or the least remorse.

If there are any children in his household, they must stand aside when this lord of the manor is around. The pretty man will not be bothered with anybody. Our Heavenly Father must take care of the children; the pretty man has enough to do to look out for himself.

As to his much-abused wife, she is a nobody; and the worst of it is, she never was anybody in his estimation—he married her because he felt flattered by her simple love and blind adoration; now that he has become indifferent to her preference, he looks upon her as a little simpleton, fit only to be his valet or minister to his wants and wishes unmindful of her own.

The soft speech and saint-like visage of the pretty man has broken many a trusting heart.

But why is it that women are so blind? I sometimes think they deserve the punishment they get.

Heaven defend me from marrying a pretty, effeminate man! I would as soon think of throwing myself into a lion's den! One look at such a man is enough for me. I always feel like passing my hand rapidly over his face, from the forehead to the chin, then back again, as we children used to do at school, saying, "This is the way to spread the bread, and this is the way to cut it." This *cutting it* made one's nose tingle, and for the moment displaced every feature in the face. And this is just what the pretty man needs; something to rub out the too even contour of his features; to knock the vanity and conceit out of him; and, if possible, to replace them with a little good, solid common sense.

Now, the good, noble, honest-looking man

commands the respect, if not the admiration, of every sensible woman. And no matter how plain-looking he may be, if there is character and true manliness depicted in his countenance, depend upon it, he is one of God's noblemen, and will prove himself as such.

Look at the faces of Webster, Calhoun, and Clay, and then review their lives, which were spent, each in his own way, to be sure, in doing good to others, and in a steady, unflinching struggle upward for the attainment of that knowledge which beautifies the plainest countenance.

There is nothing more to be envied than a cultivated mind. It gives to the possessor ease and grace and politeness, and clothes him with a charm that draws all unto him. And when to these are added goodness, truthfulness, charity, and a self-sacrificing spirit, we have a man who is a blessing to his race, beside whom the "pretty man" sinks into utter insignificance.

And now we come to the doll-faced, inefficient woman, who may be placed in the same category with the pretty man.

Like him, her beauty is all in the exterior; her mind is as shallow as her morals, for she is vain, cold, silly, and selfish; and the better one knows her the less respect one has for her.

If a man of intellect happens unfortunately to be entrapped into matrimony with such a woman, he will find that he has a millstone hung about his neck that will weigh him down into the very dust.

The vain, inefficient woman is no helpmate to a man, but a burden. She looks to him and expects from him everything, without making the least effort to help him gain anything. One glance into her elegant but comfortless home is enough to drive any man into the streets, away from its depressing influence. She has no sympathy with his labors, his studies, or his trials; the doll-faced, silly woman can not comprehend these things; she expects him to be her footstool, to shoulder all the burdens and cares of life alone; if he breaks down under the pressing weight, down she goes, too, and adds to his further embarrassment instead of sustaining him with her love and encouragement, as a self-reliant, brave-hearted woman would do.

But the doll-faced woman is but an automaton, moved only by the will of another; in her breast never dwelt the true, unselfish love of a true wife, nor the sweet sacrificing love of a noble mother.

The truly beautiful woman is one who is made beautiful by the impress of an intelligent mind illuminating her every feature.

The world honors that woman whose soul is filled with greatness and goodness; that

one who, side by side with the true man, is capable of grasping the realities of life; of braving its misfortunes, its cares, and its sorrows; never shrinking from the path of duty, though it lead into the hospital by the side of the brave, self-sacrificing Florence Nightingale.

Oh, I love such women as these! and the world loves and respects them; but the vain, silly, selfish things, even God condemns.

RECOGNITION.

BY MARY HAINES GILBERT.

Eyes ever wont to greet me with a gladsome smile,
I know you not; nor joyous lips that knew no guile;
Nor brow that darkened days could never overcast,
O'er the dim semblance spread the pall—I've looked my last.

Yet stay! They tell me this is he—a blackened corpse!
I know it not—but, ah! I recognize the gloss,
The sunny light of his own soft, brown, wavy hair.
O, whirlwind, Death! to rob of all save these locks fair.

"Papa!" My child, ah, no! thy father never more
Will greet thy baby eyes uplifted at the door.
Now laugh, outstretch thy little, longing arms in vain.
Carcases?—his, henceforth, are gusts and sleet and rain.

Have I affrighted thee, my boy, my husband's child?
Ah, me! 'tis grief hath made my accents strangely wild;
But for thy sake, my boy, I'll learn to smile—aye, laugh!
Yea, this deep cup of misery I'll learn silent to quaff.

'Tis not for thee to drink the bitter cup, my boy;
Thy early days should golden be, without alloy.
Yea, the dark hours shall hold me smiling as of yore,
Smiling and brave for thee—I'll fright his babe no more.

Take it away! It is the dust that held his soul.
It is not he! "The grave of all is not the goal,"
Thank Heav'n! "Ashes to ashes, earth to earth." The
breath
Is thine, the life—the spark Divine!—is God's, O Death!

PAUL ELSON, THE HEROIC SAILOR.

AN exchange furnishes a vivid account of a man whose noble heroism and almost superhuman efforts in behalf of a shipwrecked crew, in the Indian Ocean, deserve commemoration in most enduring marble. Paul Elson was the name of this heroic soul while on earth, for his body succumbed to the fatigue and exposure incident to the earnest discharge of duties undertaken in behalf of fellow-sufferers. The account, briefly given, is as follows:

On the 29th of last July the ship *Rothsay*, which but three days before had cast off from the Calcutta tug, was caught in a cyclone. On the 30th she lay a wreck at the mercy of the waves. Then the pilot, Paul Elson, gathered together a few volunteers and constructed and rigged a raft. Thirteen of the crew got on her; the rest, as is usual on such occasions—and therefore the heroism of this one man stands out all the grander—were frantic with terror, praying, cursing, yelling, drinking. Elson was the last to leave the ship, the captain having been disabled by an accident. Leaping over, he cut the hawser that held the raft to the *Rothsay*, and took upon himself the

command. We shall see how he fulfilled its responsibilities. All that day and all that night, we are told, the seas broke heavily over the raft; "we were up to our necks in water," says the man who recited the story, "for she floated low." All the night, nevertheless, Elson, who appears to have been a powerful swimmer, swam round and round the raft, lashing her together and making her stronger, as best he could. Now and again would the furious waves wash over the raft, and ever and anon a victim went away into space and eternity along with them. Nevertheless, this brave Elson, whose heart and strength both appear to have been giantlike, would be off the raft with a dash, and would strike out, and at times bring a poor creature back. Away went a man, and Paul Elson would follow. But at last it became necessary to construct a smaller raft, so that the weight might be divided to relieve the other. This Paul Elson built almost single-handed. The larger raft floated away; the pilot and three other men took to the smaller. And here we may simply record the fact that this separated Elson from his servant,

a native boy, whom we are assured Elson tended with the care of a mother, and never once lost sight of in the midst of all his fearful toil and anxiety. "He kept near him; he tended him as a mother would her child; he gave him our last supply of drinkable water."

The *Rothsay* had sunk on the 29th of July, and this was the 2d of August. To follow out the account given in the *London Daily Telegraph*: "The raft was drifting under a raging tropical sun; for three days there had been no food, no water; worse than this, the frail support itself began to break up, and swimming about in a heavy surf, Paul Elson

became much exhausted. The end, of course, could not now be far off. First one of the men was washed away, and then another, until Elson himself and the Scotchman who tells the story were the sole survivors. 'Pilot,' said I, —so the narrative runs—'we must fight it through!' 'O Fraser!' answered he, 'I can't hold out any longer.' * * * 'Then a heavy sea broke upon us, and knocked him off. I found it impossible to hang on, and was forced to let him go.' And so the story ends. The body of Pilot Elson, worn out by his incessant labors, floats away into the great deep, there to lie till the sea shall give up its dead."

MR. FROUDE IN AMERICA.

IN "OUR ANNUAL" (1866) we published the accompanying likeness, with a sketch of the eminent writer and lecturer, who is now on a visit to America. He has changed since then, and is older, if not wiser. We can only claim that our portrait, which was cut from an excellent photograph, may be supposed to be more like him as he then appeared, than as he appears to-day.

James Anthony Froude was born in Totness, Devonshire, in 1818. He pursued a course of collegiate training in Oriel College, Oxford, and then studied for the church; was ordained a deacon in 1845, but soon after abandoned theology for literature. His "History of England" is distinguished for the boldness and originality of the author's views on important events, especially for his attempted vindication of Henry VIII. Besides this history, he has written on various subjects, mainly for the leading periodicals of England. He occupies the foremost position among British historical writers of the present day. His physiognomy belongs to the class of which the philosophical Herbert Spencer may be taken as a good representative. There is, however, more of the practical and matter-of-fact in Froude's mental make-up. The direct look and the close lips indicate definite purpose. His whole physiognomy warrants the inference that he is somewhat set in opinion. He would be known, as a writer, for boldness and clearness of statement, and for originality of conception. Caution and Secretiveness are not sufficiently potential to render him over-guarded, though correct in the choice of expression, while Self-Esteem, Combativeness, and Destructiveness are strong enough to render him earnest and outspoken and disinclined to evade. This is

an almost purely mental temperament, and the organization is every way adapted to the chosen pursuit, literature.

A public dinner was recently given to Mr. Froude in New York, by his American publishers, at which he was welcomed by a large and pleasant gathering of leading Americans engaged in literary pursuits, and others of eminence. George W. Curtis presided, and among the guests were Ralph Waldo Emerson, Rev. H. W. Beecher, W. C. Bryant, Dr. T. D. Woolsey, Dr. E. H. Chapin, Dr. H. C. Potter, Rector of Grace Church; Dr. Noah Hunt Schenck, Rector of St. Ann's Church, Brooklyn; Dr. H. W. Bellows, Hon. A. D. White, President of Cornell University; Col. T. W. Higginson, Dr. Abel Stevens, Bret Harte, Parke Godwin, Dr. J. G. Holland, D. A. Goddard, of the *Boston Advertiser*; Geo. W. Childs, E. L. Godkin, J. W. Harper, Jr., Judge C. P. Daly, Prof. Arnold Guyot, Dr. P. Schaff, W. H. Appleton, George Jones, Dr. Edward Bright, Col. R. M. Hoe, Augustine Smith, Dr. W. M. Taylor, William A. Booth, Judge Fancher, Robert Bonner, Dr. S. I. Prime, Hon. H. O. Houghton, R. H. Stoddard, President Gilman of the California University; J. M. Bundy, E. C. Stedman, Dr. W. H. Ward, John Hay, L. C. Davis, of the *Philadelphia Enquirer*; Dr. H. M. Field, of the *Evangelist*; Mr. Goodrich, of the *Boston Post*; Edward King, of the *Boston Journal*; C. D. Warner, author of "My Summer in a Garden;" J. R. Thompson, of the *Evening Post*.

After a brief address of welcome by the Chairman, Mr. Froude rose to respond amid loud cheers, which were repeated again and again. He spoke with great ease and fluency, in a manner entirely devoid of any oratorical effort. The following is a part of his address,

which, on account of its reference to Ireland and Irish affairs, can not but prove interesting to the reader:

When, a few years since, an English squadron was engaged with the forts on the Peyho, one of our ships ran on a bank, and was suffering severely from the Chinese fire. An American frigate, which was in the river, came to our help—the commander saying briefly, that “blood was thicker than water.” That blood was thicker than water, sent Dr. Kane into the Arctic Circle in search of Sir John Franklin. That blood was thicker than water, induced the chivalrous editor of the New York

brought me many pleasures. Of all these pleasures, not one has given me so much gratification as the recognition which my writings have been so fortunate as to receive in this country. Long ago your Historical Societies at Philadelphia and Boston were among the first to hold out a hand to me. Your reception of me here this evening, gentlemen, would have been the most agreeable experience in my literary life, were it not that I feel oppressed by your goodness to me. When I see myself here, surrounded by the most brilliant representatives of American literature—by men whose names have been household words wherever



JAMES ANTHONY FROUDE.

Herald to dispatch Mr. Stanley into the heart of Africa to seek and find David Livingstone. The same feeling has created in the English nation a more genuine delight in the success of a private enterprise of an American citizen, than if Livingstone had been discovered and brought home by the agents of our own societies.

My literary career has been a chequered one. I have been connected from the beginning with subjects on which passion is still boiling. Those who handle hot coals are apt to burn their fingers, and I have now and then burnt mine. Literature, however, has also

the English language is spoken—I am sure that you are forming expectations of me which I shall inevitably disappoint. We are all of us so constituted by nature that we can swallow a large measure of flattery, but the digestive power even here has its limits. I know too well the measure of my own capabilities. You make me feel like Falstaff before the battle of Shrewsbury—“Would ’twere evening, Hal, and all were well.” Would it were a fortnight hence, when you have heard what I have to say to you, and your good opinion of me had remained unchanged.

Some eighteen months ago, at a London

breakfast table, it was mentioned that one of the most prominent Fenian leaders was making a tour in the United States, dilating upon English tyranny and the wrongs of Ireland. No doubt the text is a pregnant one, and it probably did not suffer in the commentary. Irish patriotism has many a charge to bring against England, which can be but too well substantiated. England can not complain if Irishmen have a long memory. There are, however, features in the long tragical story which, if they do not palliate, at least explain and make intelligible much that we could wish undone—features which, naturally enough, the Irish overlook, yet which should be borne in mind if an impartial judgment is to be formed on the controversy. I was aware how great an influence America possesses in Ireland. The judgment of America has more weight in Ireland than twenty batteries of English cannon, and that judgment ought not to be pronounced after hearing only the counsel for the plaintiff. I said hastily, I think I will go over and give some lectures on the other side. I spoke without serious intention; but the idea having once presented itself to me gathered form and fixity. I am not an Irishman. I do not own an acre of land in Ireland, but circumstances during the last thirty years have thrown me much among the Irish people. They are a people who either attract strongly or repel strongly. I myself had always felt myself specially drawn toward them. When at college, I used to spend my vacations wandering in the Irish mountains. I have lived in peasant's cabins for months together. I was once laid up with severe illness in the wilds of Mayo, and the poor creatures treated me with a tenderness which I shall never forget. Their history attracted me. Their condition personally interested me. I knew Ireland before the famine. I knew it in the famine. I was in Ireland afterward, in 1848, in the Smith O'Brien insurrection. Since that time I have been an Irish tenant. Indeed, I may say I am an evicted tenant. I have been turned out of my holding, and can sympathize with the special wrong of the country, as I was very unwilling to go. But my landlord simply wanted to live in his own house and attend to his duties. If all evictions were as innocent as mine, there would be little to complain of, and when I go back I hope to find some other place in the same county which will suit me as well.

When I was writing my *History of England*, I was led to look closely into the conduct of the English Government toward Ireland in

earlier times. When that book was off my hands, I began to examine into the action of the celebrated Penal laws of the last century. I had read what very few persons have read—the secret correspondence between the English and Irish Administrations during all that period. I felt, in short, that I had something of importance to say, and I wished to say it. I would not act in such a matter without advice. I consulted my friends, and their answers were generally unfavorable. One said I should be mobbed by the Irish. Another, that he supposed I should tell the truth; there was nothing so unpalatable as truth; I had better let it alone. Others urged more gravely that it was unbecoming and improper to discuss questions of our own domestic politics in a foreign country. There were some, however—and those who knew Ireland best—who said to me, “Go!” and my own instinct said “Go!” As to the Irish, I have always been on good terms with them, and I believe I always shall be. I hope to spend a large part of the rest of my life among them, and if they have anything to say to me, they will have an opportunity at home. As to truth, it may be unpalatable, but there is a prejudice that a little of it is not unwholesome. For the more grave objection, if I were in Parliament, if I belonged to any political party, even if I was an Irish landlord, I admit that it would have weight. It might be supposed that I was indirectly pursuing some party object. But as far as I have any public character it is simply as a writer of books. I address myself equally to all English-speaking people wherever they are, and there can be no possible reason why I may not address them as well with my tongue as my pen. Once for all, however, I insist that England and America do not stand to one another as foreign nations—foreign in the sense that France or Russia is foreign to us both. Politically separate we may be, but we can not shake off our relationship. Sprung from a common stock, with a common history, common language, common laws; charged as we both are by Providence with the carrying out of that grand principle of ordered liberty, on which, as we believe, the amelioration of mankind depends, we may be rivals, but rivals only as to which of us shall represent these principles most wisely and most effectively. We may quarrel, and when we quarrel it will be with the peculiar bitterness which distinguishes family disputes. But the very acrimony is itself an evidence of the closeness of the tie which binds us. For the sting rises from the supposed absence of

the special good-will which each of us conceives we have a right to look for from the other. Be our political position to each other what it may—and for myself I hope and believe no angry word need evermore be exchanged between us—it is inevitable that we must retain an ardent interest in each other's future, and must remain connected by links of feeling such as can not exist between either of us and any other powers.

In the last century, and in the century before, when the Irish Catholics remained fixed at home, there was a no less important Protestant emigration to this country. Every season for more than a hundred years they came over in shiploads, the very pith and marrow of the colonists who had been planted in Ireland by the Puritans—the sons and grandsons of the Cromwellian settlers, the Ulster Presbyterians, the Calvinist immigrants, English, Dutch, and French, who went thither after the last conquest, and were driven out by the intolerance of the Episcopal laws. They came here, like the Pilgrim Fathers, in search of liberty which was denied them at home. In the war of Independence they made England rue the madness which had banished them. And in that same war of Independence their friends in Ireland, the Protestants who remained there, were the staunchest friends which America possessed.

Gentlemen, it is now three hundred and sixty years since an Englishman was sent over from London to examine and report upon the causes of Irish discontent. It was a time when, if ever, the Irish had the management of their

own affairs. The result was universal misery, and the conclusion was that the cause was hopeless. "Our fathers," this writer said, "could find no remedy." They had more wit and wisdom than we. How, then, can we find it? Wise men say that "the herb that will heal the wound did never grow." Nearly four hundred years have passed away; we are still seeking for that herb and can not find it. I know not if it grows anywhere, but I yet believe that though no growth of the old hemisphere, it may be discovered in the new. It is that plant which I have come in search of. I believe it to be American opinion!

Ourselves at our wit's end, if America will counsel England what to do that she has left undone, what wrong she can yet redress that Ireland may justly complain of, England, I am certain, will listen respectfully, cordially, gratefully.

If, on the other hand, a time is ever to come when political agitation is to end in Ireland—when Celt and Saxon, Protestant and Catholic, are to live side by side in peace and quietness, it will be when America tells the Irish that they have no longer a grievance which legislation can redress, and that they must depend for their future prosperity on their own industry.

In appearance Mr. Froude is tall and impressive; his voice is very pleasing, being gentle and musically toned. As there seems to be much diversity of opinion with reference to the pronunciation of his name, it may be in point for us to say that the gentleman himself pronounces it as if spelled F-r-o-o-d.

CHANGES IN CHARACTER.

NEW varieties of the human race may be produced by taking advantage of the principles of selection and hereditary transmission, which shall be as much superior to the men and women of past ages as the finest varieties of apples, for instance, that we now enjoy are superior in size and flavor to the original species from which they have been developed, or as any variety of plant and animal, improved by selection and culture under man's superintendence, is superior to its native, ancestral stock. Second, to illustrate the changes which may take place in individual character. Those who affirm that character can not be radically changed, are like those who affirm that species of plants and animals can not be changed. That the latter affirmation is untrue is proved by the facts furnished

by every farm-yard, every orchard, every garden. That the first affirmation is untrue should be proved by the facts furnished by every family. Is there not abundant evidence that any person may, by reason of some strong purpose, become at the expiration of years very different from what he would otherwise have been, and different from any one of his ancestors? The speaker was assured of this, and, further, that a variation leading to such a result may be started at any point in one's career. The motives and purposes which are born in the hearts and minds of men from day to day, are like the offspring of a species of plant or animal; and as the skillful culturist or breeder in seeking for improved varieties carefully selects and favors the best one of all that appear, so any person may, to a considerable extent, real-

ize his ideal in his own character by continually favoring those motives and purposes which accord with that ideal. This is true of general character, and also of specific things in character. Any noble quality may in this way be produced; one has but to constantly vary in the right direction, and at the end of a life-time marvelous results will appear. Here is a young man, we will say, who is hard-hearted, as his ancestors have been before him. Must he continue so, and never know the ineffable happiness of a soft, broken, receptive heart? No; let him give place to those impulses, those experiences, which favor the last-named condition—let him vary constantly in that direction, and each succeeding day his character in that respect will be changed, each succeeding day will find him a modified being—a new variety; and at the expiration of a year, perhaps, the accumulated changes in character resulting from daily variations in the direction of soft-heartedness may be so great as to surprise the subject and all his friends and acquaintances.

This process of variation—this realizing of our ideals—may undoubtedly take place, to some extent, in persons who have known nothing of God's grace. The effect of that is to give us higher ideals, better purposes, and increased power to realize them; so that the person who has really accepted Christ as his counselor and friend has greatly improved chances of turning out a character which shall be altogether superior to that of his ancestors.

A third point: when plants and animals are changing from an inferior to a superior condition, in consequence of improved culture and

better means of subsistence, the moment the care and skill of man is withdrawn, and their means of subsistence deteriorates, the principle of reversion comes in, and tends to carry the improved varieties back to the original forms. Our improved flowers, food-plants, and domestic animals might all in time lose their improvements if subjected to the conditions in which they existed when man brought his skill and wisdom to bear upon them. So if we would have greatly improved characters in the end, we must maintain the conditions which have caused the improvements already made. If we neglect these there will be a tendency to revert. If spirituality be our object, then we must continue to seek the things and do the things which favor it—the processes of mind and heart-renewal must go steadily forward forever. The tendency to reversion in the case of improved plants and animals is weak in proportion to the amount of variation which has taken place and the length of time in which the variation has occurred; and so it is in our spiritual experience, the greater the improvement made, and the longer the time in which we have set our faces in the direction of perfect unity with Christ and the pure spirits above, the less danger there is that any principle of reversion—any “falling from grace”—will undo the work already accomplished; and, besides, it is possible, if we are to credit the Scriptures, for every one to reach a point where reversion becomes impossible.—*Oneida Circular*.

[This is encouraging for the Reformers, and we trust sensible men and women will make practical trial of the principle.]

ORGANS OF THE BRAIN—HOW DISCOVERED—No. II.

SELF-ESTEEM.

DR. GALL discovered this organ by noticing the head of a beggar, who had inherited a fortune from his father, and thought it beneath him to apply himself to business, either for the preservation of his fortune or to acquire a new one. Dr. Gall molded his head, and on examining it closely he found the organ of Cautiousness small, with a small head in general, but with the crown very much elevated. The beggar, on being questioned relative to the matter, said that he was always so proud as not to be able to condescend to apply to business, and he felt that his pride

was the only thing that stood in his way of acquiring prosperity when he had used up his fortune. This, of course, was an excessive development, and it being such led to its discovery. A proper development of Self-Esteem harmonizes with other organs, imparts a degree of satisfaction, and leaves the mind open to the enjoyment of the bounties of Providence and the amenities of life; it inspires us with that degree of confidence which enables us to apply our powers to the best advantage in every situation in which we are placed. When the organ is small the unfortunate individual suffers from a sense of un-

worthiness, stands aside, and gives place to others who have assurance, and is content to be subordinate.

APPROBATIVENESS.

Dr. Gall met with a woman in the lunatic asylum, who fancied herself to be the Queen of France. He expected to find the organs of Self-Esteem largely developed, but instead there was a hollow, and a rather large protuberance on each side. This at first caused him much embarrassment, but he soon perceived that the woman's insanity differed very much in its action from that of men who were insane on the subject of pride; the latter affected a masculine majesty, and were calm, lofty, and arrogant. This woman, on the contrary, manifested a restless frivolity, eagerness to announce high birth and boundless riches, and was lavish in her promise of favors and honors. She solicited attention, and strove by every means to obtain admiration. From that time he perceived the difference between Self-Esteem and Love of Approbation; from that day to this millions of observations have verified the truth of his conclusions.

COMBATIVENESS.

This organ was discovered by Dr. Gall by collecting together a number of the ignorant, and those following different occupations. After acquiring their confidence, by giving them money and wine, he drew them into conversation in regard to each others' qualities; he studied their characteristics and compared their developments. Such as were remarkable for quarrelsomeness, for *bravo*, had a wideness of the head backward from the top of the ear, while those who were noted for cowardice were narrow in that region. In Vienna animal fights were frequently indulged in. One man was so intrepid that he often presented himself alone in the arena, to contend with the bull. In his head Dr. Gall found Combativeness to be very large; and in a young lady, who had repeatedly dressed herself in men's clothes, and maintained battles with the other sex, it was also equally conspicuous.

ADHESIVENESS OR FRIENDSHIP.

Dr. Gall was requested to mould the head of a lady, who was a model of friendship. He did so, and found on the cast two prominences symmetrically proportioned, one on each side, giving wideness to the back of the head, some two inches and a half upward and backward of the ear. The lady had suffered great mutations of fortune; she had been rich and then poor, and rich and poor again, but had through all these changes remained firmly attached to

her friends. As this was a strongly marked development, and that trait in her character was very uncommon in its strength, the idea was naturally suggested that this part of the brain might be the organ of the disposition to attachment. Many subsequent observations confirmed the conjecture. This faculty is the basis of fraternal love, and may exist between men, between women, or between men and women. See Ruth i. 16, 17, 18; II. Sam. i. 26. It attracts men, and also animals, to live in communities, flocks or herds. While Amativeness gives sexual love, Philoprogenitiveness gives the love of parents for offspring, and the love of pets; Conjugalitv gives the mating tendency; and Veneration gives filial love.

PARENTAL LOVE, OR PHILOPROGENITIVENESS.

Dr. Gall observed that in females the upper part of the occipital bone, (the middle of the back-head, but on a plane horizontal with the top of the ear) receded more than in males, that the head was longer from that point back, and naturally inferred that the brain beneath this region was probably the seat of some stronger feeling in woman than in man. For five years he kept the subject continually in his mind, adopting various opinions, all of which he saw reason to discard; at length he noticed that the skulls of monkeys, in this particular part, bore a striking resemblance to those of women, and he inferred that the brain lying under this prominence was the probable quality of the organ which woman and these animals equally possessed in a high degree. During the delivery of a lecture, it occurred to him that one of the most remarkable characteristics of these animals is an extreme love for their young—that this might be the long-sought organ. He hastily begged his class to retire, hurried to his cabinet, and commenced to compare all the skulls he possessed, and found the same differences to exist between females and male skulls in general. All subsequent observations confirmed the correctness of his discovery, viz., that this part of the brain is the organ of love of young.

BENEVOLENCE.

A friend of Dr. Gall, knowing that he had sought external manifestations of mental qualities, requested him to mold the head of a servant, who was remarkable for his amiable disposition and goodness of heart. It is impossible, said he, to find a greater degree of goodness than that young man possesses. Dr. Gall complied with the request, and perceived a prominence of the frontal bone, at the top of the front part of the head. He remembered a

school-mate, who had a like amiable temperament. He was also requested by a lady to mold the head of her son, who possessed an amiable disposition. He found all these heads were prominent in this region, and that the disposition to do good was innate, and here was its organ.

ACQUISITIVENESS.

This organ is located upward and a little forward of the ear, and when large gives a fullness and width to the head in that region. Dr. Gall discovered it by comparing the heads of persons whom he invited to his house, and who made him their confidant; he found some of them accused each other of petty larceny, and took great pleasure in pointing out those who excelled in such practices, and he found others who would rather starve than partake of what their companions had stolen; the first he found to be largely developed, and others comparatively small.

CONSTRUCTIVENESS.

This organ is located on the temple, and when large gives breadth and fullness to that region. Dr. Gall discovered that persons distinguished for mechanical tastes were very wide in this region. Some gentlemen of Vienna presented to him a person concerning whose talents they solicited his opinion. He told them he ought to have a great tendency toward mechanics. They then told Dr. Gall he had been examining the head of the famous painter, Unterbergen, and expressed dissatisfaction with the opinion, but the man himself was greatly struck with his observations, and declared that he had always a passion for mechanics and he only painted for a livelihood. He took the party to his house, where he showed them the machines which he had invented, and others which he had improved. Constructiveness is now well understood to be an element in the art of painting, or modeling. Ideality and Constructiveness working together make the artist, the inventor, the mechanic.

CALCULATION.

A boy near Vienna was spoken of on account of his great talent for calculation. He had not received any particular instruction beyond that bestowed on other boys at school; and was about on an equal footing with them. Dr. Gall induced him to come to Vienna, and when nine years of age presented him to his audience, when there were given him three numbers to express which required from ten to a dozen figures, and he was asked to add them, and then to subtract them; then to multiply them, and then to divide them by a number of

three figures; he glanced once only at the numbers, then raised his eyes and nose in the air and indicated the result of his mental calculation before the audience had had the time to make the calculation, pen in hand. He had created his method for computing numbers.

A lawyer of Vienna stated that his son of five years of age occupied himself exclusively with numbers and calculations in such a manner that it was impossible to fix his attention on any other game. Dr. Gall compared his head with that of the boy just mentioned, and found no other particular resemblance, except in the remarkable prominence at the external angle of the eye, and a little to the side onward. These cases suggested that the talent for calculation might be connected with a particular organ. Dr. Gall sought for men distinguished for this power, in order to verify the discovery. He found a man whose favorite occupation was to invent and solve problems in arithmetic, and discovered in him the same configuration. He visited private families and schools, and desired the children distinguished for calculation to be pointed out to him, and still the same development recurred. He therefore felt himself constrained to admit a special faculty for this talent. In Scotland they had a celebrated calculator, and in America we had Zerah Colburn with a corresponding development of this part of the head. It is not always an easy organ to determine, on account of its peculiar situation, but we have no doubt of the location of the organ and the function it performs.

TUNE.

The organ of Tune is situated on the lower part of the temple, a little backward and upward from the eyebrows. Dr. Gall discovered the organ by noticing this part large in a young girl, who could repeat or play whatever she heard, and recollected whole concerts if she heard them only twice. By examining carefully the heads of all the persons to whom he could gain access, who were distinguished for musical talent, he found it largely developed. The organ is sometimes diseased. Dr. Andrew Combe attended a young lady who complained of an acute pain at the extreme angle of the temple on each side, precisely in the same position of Tune; the organ was largely developed in her head, and in describing the seat of pain she placed the points of her fingers exactly on the location of the organ. In sleep she dreamed of music; during the day the excitement of the faculty reached such a height that

it could not be controlled; she felt such an irresistible passion for music that it was painful beyond endurance to repress. She insisted upon rising from her bed and being allowed to play and sing; that being unadvisable, she seized a guitar and gave way to the torrent, and with a volume, clearness, and strength of voice and a facility of execution which was astonishing.

A boy in the City of Washington was kicked by a horse in that region, and he whistled constantly; would whistle even in his sleep. The

physician, Dr. Miller, informs us that, on making subsequent examination of the wound, he found a splinter of the skull thrust into that part of the brain where the organ is located, and the irritation caused the irresistible tendency to whistle. He removed the bone, and he continued to whistle until healing set in, and he whistled less and less, until he came back to his former condition. There are many other interesting facts that go to prove the location of the organ of Tune.*

Our Country and Its Resources.

That which makes a good Constitution must keep it, viz., men of wisdom and virtue; qualities that, because they descend not with worldly inheritance, must be carefully propagated by a virtuous education of youth.—William Penn.

FARMING IN THE SOUTH.

LETTER II.—SOUTH CAROLINA.

IT is as pleasant to travel in the early spring as during late fall, since there is the same immunity from dust and heat, and nature appears equally charming in donning a fresh array of vernal garniture as in assuming the parti-colored vestments that precede the sere and yellow leaf. It is peculiarly enjoyable to journey southward in the spring, before the malaria of the moss-hung swamps has permeated the air and water; and when, as we advance, leaving behind us frost and snow and ice-bound streams, we come where the sun-god has kissed his earth-mistress into the glow and warmth and joy of renewed life; where the leaf-buds are swelling, where the white-oak axils are the size of squirrels' ears, and Indian corn is being planted, where the pink of the rose is breaking through the green calyx,

"And the fragrant hawthorn bramble
With the woodbine alternating,
Scents the dewy air."

Just so looks the vernal prematurity of the land of the Lords proprietors as one progresses in the month of March along the "Wilmington, Columbia, and Augusta railroad." Here, as we come upon a two mile trestle, over a river-swamp, is a golden glory of yellow jasmines, thrusting the sweets from their scented stars to every passing zephyr; a purple inflorescence of red-bud blooms, the deceitful Judas-tree of the botanists, blue clematis tangling its clusters among the

satin-white bay-flowers, overshadowing red cypress knees, and dropping their perfumed blossoms into the black, bankless, still, swamp waters! This is South Carolina! this is the country where cotton reigns king; and now, as we emerge from the swamp, we pass through upland thickets of live-oak—grand trees with the traditional moss-banners; lanes hedged with creamy Cherokee roses, leading to the old-fashioned, white-washed planter's houses, a grove of scrub-oak and a long row of cabins, the whilom quarters of the quondam slaves; and then a wide, level sweep of rice fields, where light spires of daintiest green float on the surface of water—a landscape which a breath of wind has power to change from looking like a quiet lake to a sunny, verdant meadow. Many of the most fruitful rice fields of South Carolina have lain unproductive since the termination of the war brought about such a gigantic revolution in the labor systems of the country. It is impracticable for white men to cultivate them, and a condition of *quasi*, if not complete subordination, seems to have been necessary to the disciplined labor involved in rice culture. The rice swamps are the homes of alligators and gophers, uncouth creatures that do not always act purely on the defensive, but on occasion "had as lief" make a supper of a man

* To find the exact location of all the organs, see the PHRENOLOGICAL BUST, for sale at this office.

as the old Egyptian crocodile. There is more upland rice raised in South Carolina now than formerly, a system of more various products having been originated by the necessities of the times. There are vast stretches of country bordering the railroad where one sees little but long-leaf pines, with white-scarred face, turpentine distilleries, and barrels of rosin. This is a branch of Southern farming that has flourished apace under the new order of things. The intervals of leisure, and changes in labor involved, suit the genius of the newly-freed men; and the turpentine farmers never have any difficulty in "hiring hands." Wine-making is carried on to some extent in the State, and is found to pay handsomely; but when one strikes the cotton region he reaches the true Utopia of South Carolina. The culture of this semi-tropical plant is carried on quite scientifically by the experienced planters. As a body of men this class of the population is well-informed and energetic. The use of fertilizers is universal among them, and the home production of composts receives their special care and attention. On wet days in the fall carts may be observed busily hauling pine, straw, and fallen leaves from the thick-

ets and woods, depositing them in the cattle-lots, yards, and thoroughfares of the plantation. Added to this are the rakings from fence corners and stables and the offal from negro quarters. In the spring, the broad, fresh-plowed fields may be seen spotted all over with the black compost heaps, interspersed with piles of cotton seed, which have been well rubbed in dirt. Then follows the turn-plow and the shovel, seed put in, a "stand" in a few days, and then "chopping out." From the middle of April till July the struggle is incessant to keep the cotton clean of grass, as on this depends its productiveness, and also, to some extent, its ability to withstand a drought.

Guano is used to an enormous extent in South Carolina, also the phosphates so extensively manufactured in the vicinage of Charleston. When there is drought guano seems to aggravate the fatal and oft-recurring disease known as Rust, which, in truth, is no disease, but an exceedingly minute insect, which fastens, multitudinously, on the leaves, and, devouring them, causes the forms and tender balls to drop off, and so incalculably shortens the yield of cotton.

VIRGINIA DU RANT COVINGTON.

WILLIAM H. SEWARD.

THE announcement of the death of this distinguished statesman has aroused the attention of the American people to a sense of their obligations to him while an active officer in our Government. Perhaps it will never be entirely known to what an extent the security and success which we experienced during the late war were owing to his efforts and splendid diplomatic ability.

The death at his residence in Auburn, N. Y., October 11th, was sudden, inasmuch as we had become impressed with the probability of his longer sojourn among us. This impression doubtless was in a great measure due to the protracted tours which Mr. Seward had undertaken and had successfully accomplished in foreign lands. Besides, he was known to be in the enjoyment of vigorous intellectual health, and closely occupied with the preparation of a work giving a history of his life and times. This, unfortu-

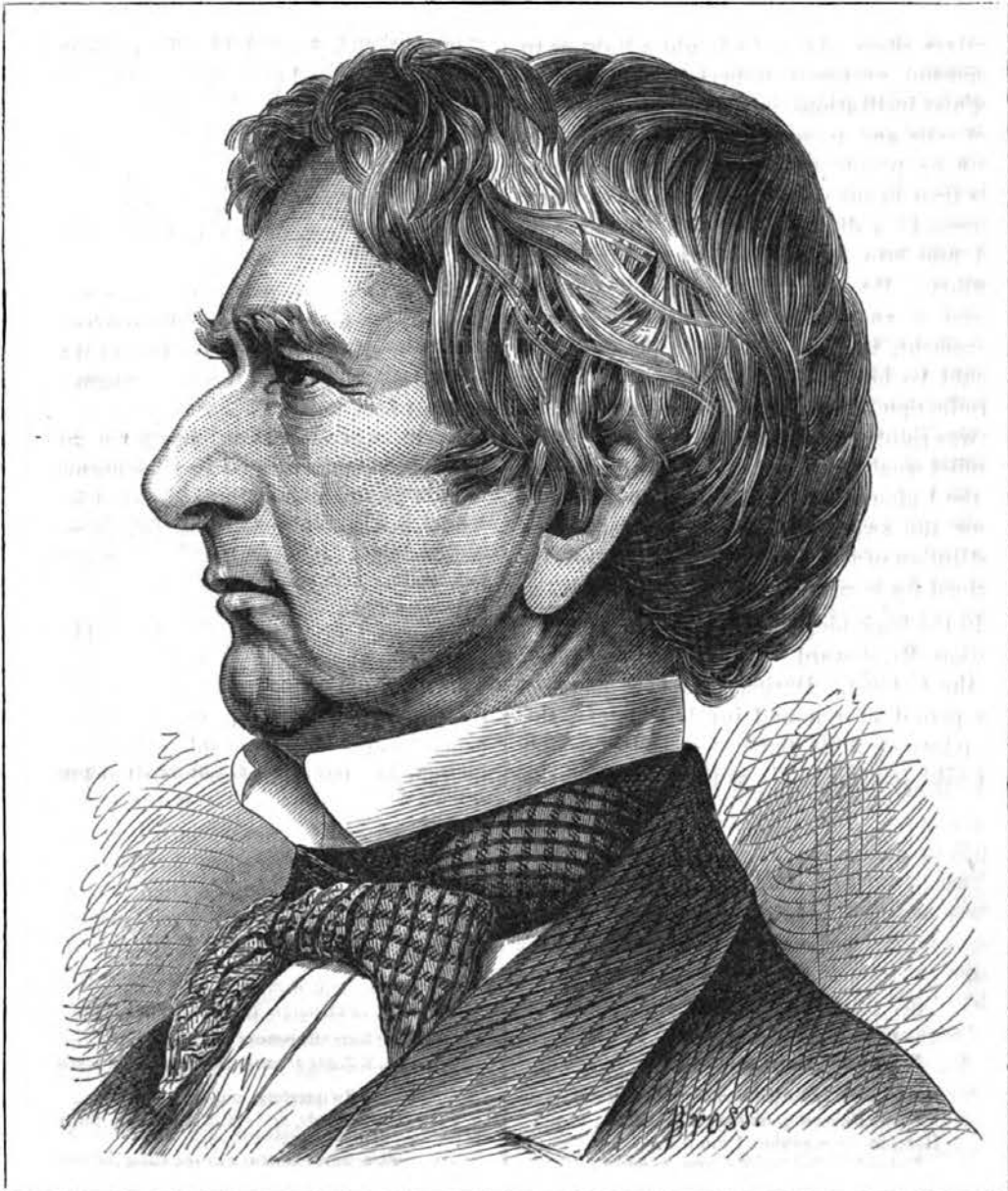
nately, he left but little more than half finished. He died in his study, surrounded by his books and papers.

The name of no living man had become more widely known throughout the civilized world than that of William H. Seward. During his travels in Asia and Japan, he was everywhere received with all the respect accorded to royalty. His greatness had penetrated into the recesses of heathen lands.

He was born in Florida, Orange Co., N. Y., May 16, 1801, and, consequently, was in his seventy-second year at the time of his decease. His parentage comprises Welsh and Irish stock. Perhaps the former predominated somewhat in the cast of his features and the general mold of his frame. There was a high degree of elastic endurance in his temperament and general organization, a degree rarely surpassed. Few men have given more years to arduous public services than

he, and very few have shown so much vigor, freshness, and original power in their performance. It will be remembered that at the time of the assassination of Mr. Lincoln, Mr. Seward, too, was made the object of a deadly attack, which very nearly deprived the nation

slavery advocate. In 1838 he was elected Governor of New York, and distinguished himself by a wise and judicious administration of State affairs. He was re-elected in 1840, and at the end of his second term returned to the practice of law. In 1849 he



of his invaluable services, and doubtless so impaired his physical powers as to shorten his life by many years. He was thoroughly educated for the law, and admitted to the bar in 1822. In early life he became a politician, taking a conspicuous place as an anti-

was elected to the Senate of the United States, where he became the peer of Webster, Clay, Everett, and the other great men of that memorable period. During his Congressional career, on account of his views on social and political affairs, he was made the

subject of much criticism and severe reflection; but, a disciple of Jefferson and John Quincy Adams, he always pursued a course consistent with the fundamental American principle of equal rights before the law; and in later years the clouds with which envy and detraction had sought to involve his name were dissipated, and his character and motives shone out in so bright a light as to command universal respect. His trust in popular institutions, in their capacity to correct evils and to secure the prosperity of a growing people, was steadfast and sublime. His trust in the spirit of the people as being adverse to a disruption of the Government, led him into error in regard to the recent conflict. He believed, as Mr. Lincoln believed in the earlier days of the secession movement, that the "irrepressible conflict" would be brought to a peaceful and happy termination without a strife of blood. But he was right at least in his prevision that the conflict would end, as it did end, in a triumph of the Union cause; but he was unwilling to draw the sword in defense of the existing institution of Government while a chance remained for securing a settlement without it.

In the beginning of Mr. Lincoln's administration, Mr. Seward was given the first place in the Cabinet. During that ever-memorable period of war and involved issues, the Secretary of State pursued a course which brought renown to his country and won the

admiration of a world. At the close of Mr. Johnson's term of office he withdrew from public life. In '69 and '70, he made the tour around the world, to which we have already alluded.

In his disposition Mr. Seward was very amiable and generous. In all the relations of life his reputation was without stain. He was a good husband, a good neighbor, and a good friend, as well as a good and great citizen. In Auburn, where he lived so long, he was universally beloved and honored, and the announcement of his death fell upon the hearts of the citizens, who, as a whole, exhibited great fondness and pride in him, as if each individual man and woman had lost his or her own father.

It is to be regretted that he was not spared long enough to finish the autobiography which he had designed; but we are informed that it will be completed by his son, to whom it was in great part dictated.

By his will Mr. Seward bequeaths his late home at Auburn, with all its contents and surroundings, to his three sons, by one or more of whom it will doubtless be occupied, and preserved intact as far as possible in its present condition. His other property, consisting in part of securities, but mainly in real estate in Auburn and in this locality, he divides into four equal shares among his sons Augustus, Frederick, and William, and his adopted daughter, Olive Risley Seward; the two last named being deputed to execute this provision of the instrument. His estate is estimated at \$200,000.

ROCKY MOUNTAIN ECHOES.—No. 6.

BY WILLIAM H. FABOR.

THE CROWN OF THE CONTINENT.

Fall, snow, upon the mountain top;
Shine, sun, upon the emerald plain;
The frostage of the winter drop
In presence of the summer's rain.

Beat, storm, against the mountain's breast;
Flash, lightning, on the plains below;
Here, in the sunshine, I can rest,
Unheeding lightning, storm, or snow.

Blow, wind, along the mountain side,
And whistle startled cañons through;
The pines, that crown the bold Divide,
No sweeter music ever knew.

Bloom, lilies, by the river's edge;
Hide, honeysuckles, in the wood;
Pause, deer, upon the rocky ledge;
Here nought disturbs the solitude.

But there shall surely come a time
When mountain top and valley base
Shall hear the echoes of the rhyme
That floats around man's dwelling-place.

Where Switzerland and Italy
Clasp hands, and smile a welcome down
To denizens beside the sea,
To peoples crowded in the town;

Where rivers clear, and vales of grace,
And plains that stretch an hundred miles
Await the coming of the race
Whose toils shall win dame Nature's smiles—

How long shall rise imposing spires,
And stately towers and homes so sweet,
Where, warmed by love's eternal fires,
The tender human graces meet.

O, land so fair beneath the sun!
O, Colorado! we—who know
The life-breath that from thee is won,
The honey that from thee doth flow—

We, on our bended knee, can lift
Our voices to the blue Above
In thanks that in the mountain's cleft
Our days are full of life and love.

WOOLEN MANUFACTURE IN THE UNITED STATES.

THE exhibit made in the census of 1870 of this branch of American industry is certainly encouraging. There are in all 2,891 establishments in the United States, of which there are in Pennsylvania 457; New York, 252; Ohio, 223; Massachusetts, 185; Indiana, 175; Missouri, 156; Tennessee, 148; Kentucky, 125; Illinois, 109; Connecticut, 108; Maine, 107; Iowa, 85; New Hampshire, 77; West Virginia, 74; Virginia, 68; Rhode Island, 65; Vermont, 65; Wisconsin, 64; Michigan, 54; North Carolina, 52; Georgia, 46; Maryland, 31; New Jersey, 29; Texas, 20; Utah, 15; South Carolina, 15; Alabama, 14; Arkansas, 13; Delaware, 11; Mississippi, 11; Minnesota, 10; Kansas, 9; Oregon, 9; California, 5; Louisiana, 2; Florida, 1; and New Mexico, 1. The capital of these 2,891 establishments is reported at \$98,824,531. The number of steam-engines is 1,050, with a horse-power of 35,900, and water-wheels with a horse-power of 59,332. The number of sets of cards is 8,366, with a daily capacity of 857,392 pounds of carded wool; number of broad looms, 14,089; narrow looms, 20,144; spindles, 1,845,496. The average number of hands employed during the year has been—of males above sixteen, 42,728; of females above fifteen, 27,682; of children and youth, 9,643. The amount of wages paid to these hands during the year is reported at \$26,877,575; the total value of the materials used during the year was \$96,432,601, of which the amount paid for chemicals and dye-stuffs was \$5,833,346.

There were consumed during the year 17,811,824 pounds of foreign wool; 154,767,075 pounds of domestic wool; 17,571,929 pounds of cotton; 19,372,062 pounds of shoddy; 2,578,419 pounds of woollen yarn; 3,268,949 pounds of cotton yarn; 1,812,560 yards of cotton warp; 140,733 pounds of

warp. The value of all other materials used was \$5,670,250.

Among the productions of these 2,891 establishments are 63,840,612 yards of cloth, cassimeres, and doeskins, 58,965,286 yards of flannel, 1,941,865 yards of felted cloth, 2,668,767 yards of repellants, 2,853,458 yards of tweeds and twills, 14,078,559 yards of satinetts, 5,506,902 yards of kerseys, 24,489,985 yards of jeans, 14,180,574 yards of linseys, 1,932,382 yards of negro cloth. Number of pairs of blankets, 2,000,439; number of horse-blankets, 58,553; number of carriage robes, 22,500; number of coverlids, 226,744; number of shawls, 2,312,761; number of pounds of yarn, 14,156,237; number of pounds of rolls, 8,683,069. Total value of production, \$155,405,058.

This interest will grow, if permitted, until America will produce all the wool and woollen goods she consumes. Free Traders, however, would open our ports to foreign manufacturers, and this, through the competition of pauper labor, would have a tendency to break down and ruin this immense interest. Let Americans sustain America against all the world. We have enough to do at present to take care of ourselves and those who come among us, without, through unwise legislation, contributing at great sacrifice to sustain selfish capitalists abroad.

FRAGMENTS FROM MRS. HORACE MANN.

IN "*Moral Culture*" is a series of letters addressed to a friend by Mrs. Horace Mann, written in 1843, and first published in 1863, as part of the "*Kindergarten Guide*" of her sister, Miss Elizabeth P. Peabody, the second edition of which appeared in 1869. These letters, written as they were by the wife of so warm an advocate of Phrenology as the late distinguished educator, Horace Mann, must excite the interest of all true disciples of Gall and Spurzheim. The origin of these letters is thus explained by the author:

"I have been urged to publish these letters, written twenty years ago, as an appendix to a *Kindergarten Guide*, because the school herein described was a groping attempt at something of the same kind, and had left very pleasant memories in the hearts of the children referred to—now no longer children, but some

of them men and women nobly and beautifully acting their parts on earth as parents; and others—having died martyrs' deaths for human freedom in the desolating war that ravaged our beloved country—angels in heaven.

"If an inborn love of children and of school-keeping are qualifications for judging of the best means of educating them, I may claim to have known something of the theory and practice best adapted to that end. My *object* was to *put them in possession* of all their faculties. Many improvements in methods, and many facilities in means have been added to the resources of teachers since these letters were written. Physical training is felt to be of the greatest importance, in preference to the ancient mode of shutting children up many hours in close rooms, and repressing all natural and joyous life. The principle is discovered of educating by *directing* the activities. Hence the *Kindergarten*."

Notwithstanding the intrinsic merits of the Kindergarten method, its application in this country seems to have failed, in numerous instances, of the results aimed at.

Besides the above, the following extract from one of them must suffice for the present:

"I find a very great difference in children in regard to arithmetic. I have had one scholar who never could (she died at fifteen) go beyond a certain section in 'Colburn's Mental Arithmetic.' She reached that after repeated trials; for when I found her grounded (aground) at any special point, I always turned back and let her review; and in that way she would gain a little at every repeated trial. This child found geometry easier than numbers, and mastered 'Grund's Plane Geometry.' She could also write out a reminiscence of Dr. Channing's sermons, or remember anything interesting in history, natural history, or anything of an ethical character. I also had one gifted little scholar, who could not learn to spell accurately, but she *drew* with great power and beauty—with an 'eye that no teaching could give,' as was said of her by a fine artist. These discrepancies in talents are very curious. Phrenological philosophy alone explains them." *

* Since these letters were written, the St. William's School, established in Edinburgh, by George Combe, Esq., and in which that distinguished man taught personally during the latter years of his life, has proved conclusively that the phrenological philosophy is a fine basis for education. The principle there taught and practiced is, to cultivate assiduously those faculties which were found naturally deficient in the pupils; thus aiming to make *whole* men out of what otherwise would have been but *fragments* of men.

CALIPERS—TAPE MEASURES.

THE first engraving represents calipers used by those who study Ethnology and Phrenology. As the development of the brain begins at the *Medulla Oblongata*, or the point where the brain is connected with the spinal cord, distance from that point to any part of the surface of the brain indicates the development of that part. In order to determine the length of fiber from that central point of the brain, we must measure, during life, from the opening of the

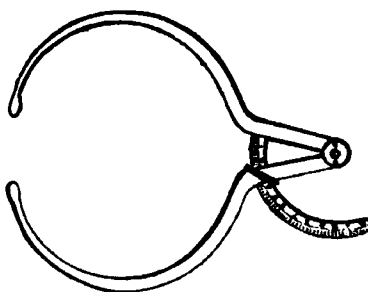


FIG. 1.

ear (see cut 2) to the surface of the head in its several parts, as at B, C, D, E, G, or the width of the head from side to side, directly in the region of the ears, to learn the lateral development. The bulb at the end of each of the legs of the calipers may be carefully placed in the opening of the ears (A); and the other end placed at any desired point on the head, and the scale, marked in inches and fractions, will show the width from point to point, when the calipers are open.

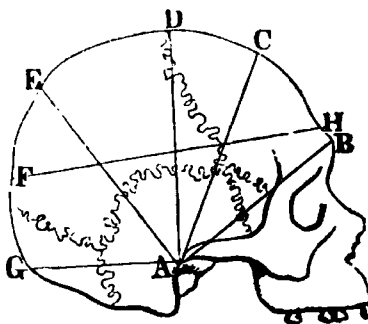


FIG. 2.

An opponent of Phrenology was recently in our office, and he said the difference in the thickness of different skulls was his stumbling-block in regard to the science. A skull happened to be within reach, and taking the calipers we measured the width and height from the opening of the ear to Firmness, then turning to the unbeliever, we applied the calipers in the same way to

his head, and we found that the skull, just above the opening of the ears, was an inch and a half wider, and from the opening of the ear to Firmness an inch and a half lower, than the head of our critical friend.

"Is that possible?" said he. "I see now that distance from the center of the brain is your method of judging of the development of the brain; the slight difference in the thickness of different skulls can not account for the differences in the cranial development. If this is Phrenology, I have been opposing something different."

TAPE MEASURE.—Besides the calipers, we use a tape measure for ascertaining the circumference of the head just above the brow and around the most prominent part of the back-head (see cut, H to F.) We measure from the root of the nose to the back of the neck, or the spinal process, a sharp bony part just above the nape of the neck. We also measure from ear to ear, over Firmness, Individuality, Benevolence, Parental Love, etc.

A man who has had large practice in measuring heads will be able to estimate, within a quarter of an inch, the size which a head will measure, by the hands alone.

The calipers (made of composition metal which will not rust) we can supply at \$6 per pair. Neat tape measures, suitable for use in measuring heads, we can send by mail for 75c., 88c., or \$1 each, according to style.

IMPORTANCE OF MENTAL SCIENCE IN SCHOOL.

BY W. R. BIERLY.

IT is getting to be pretty generally conceded that the teacher, whether parent or substitute, must be to some extent acquainted with the laws which govern the actions of children. Taken strongly, a teacher or governor who would punish a child with a poker would be considered either devilish or insane. And why? Because he would be violating a law of nature which every one's experience proves to be correct and just.

But there are laws governing the mind in its relation to the body as well as laws determining the capacity of bodily endurance. Although the mind is not made of matter, yet, since it acts through a material medium of the body, its actions are much modified by the condition of the medium; and it follows that mental action, as known, is governed by laws similar to those attending bodily action. It is

true these laws do not become as generally known as those which determine other things, because, perhaps, they are possibly a little more subtle and not sufficiently sought. Still, because they are not known, is no reason why they should not be known. And, then, if a law should be followed absolutely where common experience justifies it, so should one be followed which has been ascertained by study and observation. And since it is universally considered to be either madness or infinite ignorance, where one violates a law which every one's experience proves to be just, so should it be considered at least either criminal neglect or stupidity, when laws are not known which might be known by moderate study.

By parity of reason also, what is important in outward actions is of equal or even greater importance in the inner actions which precede and determine the outward. And here let authority strengthen the argument.

Herbert Spencer says: "Grant that the phenomena of intelligence conform to laws; grant that the evolution of intelligence in a child also conforms to laws; and it follows inevitably that education can be rightly guided only by a knowledge of these laws. To suppose that you can properly regulate this process of forming and accumulating ideas without understanding the nature of the process, is absurd. How widely, then, must teaching as it is differ with teaching as it should be, when hardly any parents and but few teachers know anything about psychology."

This is certainly strong testimony in behalf of a knowledge of mental science in our schools. Bemoaning the absence of the study from the teacher's course, Spencer enforces the necessity of its immediate supply, and would have parents interest themselves in the same study. Needs the importance of mental science in the training of the young any further defense?

Is there a weightier consideration than the destiny of the soul? Not in life, nor in death; not by reason, nor by experience; not in science, nor in revelation can there be discerned anything of equal intrinsic importance.

It is related that an excellent mother, in writing to one of her sons on the birth of his eldest child, said, "Give him an education, that his life may be useful; teach him religion, that his death may be happy." What more could be required to round out and perfect the human character and make it meet for earth and heaven?



NEW YORK,
DECEMBER, 1872.

GOOD-BYE 1872.

IT may be that Longfellow, in his oft-quoted poem "Excelsior," embodied the prevalent sentiment of the American public. "Advance," "onward," "progress," are the watchwords we hear rung out on all sides; but we feel that, in too many cases, these are indicative of false sentiment, of unduly exaggerated hopes, and of conduct based upon unsubstantial premises. The youth, so feelingly described by Longfellow, lost himself amid the snow-drifts of the mountain. His cry of "Excelsior" led on only to destruction. The American people are, as a nation, wonderfully active. There is, indeed, too much action and too little thought; hence, the repeated failures which are exhibited on all sides. But we would not have it understood from these remarks that as promoters of a special enterprise we are in any way opposed to the sentiment of *progress*; for the idea in itself conveys much of encouragement and stimulation to general society; but in order that we may, in our own sphere, press on the more briskly, we would recur to our past, and seek for a sound basis on which to found hopes of future advancement.

During the past twelvemonth there have been published within the covers of the PHRENOLOGICAL JOURNAL over two hundred articles of a special nature relating to biography, history,

science, and art, besides a multitude of brief sketches and paragraphs touching as many different subjects of interest. Our illustrations have been thickly sown; a brief examination shows that an average of fully one hundred and eighty engravings, embracing almost every variety of subject, from a portrait of some eminent man or woman to an exhibition of the fry of shad, have been introduced into the letter-press.

The endeavor has been made with as much earnestness as the object has been ever kept in view to glean from the progression of scientific research such facts and information as would be practically valuable to our readers. Especially has our attention been given to those eminent scientists who, like Huxley and Tyn-dall, have devoted themselves in great part to investigation of physical phenomena having more or less relation to human nature; or, like Jackson, Bain, and Maudesley, have sought to open up to our clearer view the functions of mind. As Americans, we have given prominence to American science, art, biography, and social economy; and what has been gathered from abroad to garnish the several departments embraced in the JOURNAL, has been so gathered because worthy our serious consideration.

The series of illustrated essays on "Expression: its Anatomy and Philosophy," that on "How the Different Faculties Combine," and the articles on fish and their culture, have received many warm encomiums from the press and individual readers, while single articles here and there published in the course of the year have been acknowledged by correspondents as of special value in one way or another to them. With such evidence of appreciation, we approach the close of 1872 with few regrets.

Our aim has ever been to make the JOURNAL a power for good among men, and our hopes, although not fully real-

ised, have met with so much encouragement that we could not now falter in our efforts without experiencing an overwhelming sense of recreancy to duty.

This number of the PHRENOLOGICAL JOURNAL for December closes Volume Fifty-five, but the January number of

1873 will open Volume Fifty-six; and while we are now called on to say *Vale* to a large clientage that has afforded us aid and comfort during the twelve-month past, may we not expect to say *Salve* to as large a retinue of well-wishers next month?

ON THE FORMATION OF CHARACTER.

THE sculptor takes a mass of soft clay, which he works into a copy of the figure he would put into stone; then the block of marble is placed in position, when, with chisel and mallet, the work of hewing and shaping begins. How unlike an image of the human head or an angel that block of stone first appears! and what study and labor and skill it will require of the artist to bring his work to perfection, and develop a copy of "the human face divine," of the image or the angel for which he studies and strives. But the angel is there, and if the sculptor knows how, he can bring it out of that cold and hard marble so perfectly that you almost hear the rustle of its wings! How beautiful! How exquisite! How angelic! Think of it; there was the simple block of almost worthless stone—of which there are numberless quarries and mountains just as good—which, by study, skill, and effort, has been converted into a thing of beauty and a joy forever.

Reader, did it ever occur to you that each and every human being, when uncultured and undeveloped, may be likened to clay in the hands of the modeler, or like marble in the hands of the sculptor? Do you not now see the simile? God created every human creature with a never-dying soul. Each has an angel in him. Alas! alas! how many remain awhile on earth, even into old age, without being converted into anything higher or more beautiful than the original clay

or stone, as we find it in the field and in the quarry. The angel remains concealed, covered up, hidden; and the life of such a man is, indeed, a miserable failure.

In considering the matter of success or failure, we blame no one. Most persons are, to a considerable extent, creatures of circumstances. If they *knew* how to make themselves beautiful, they would do so; if the invalid *knew* how to woo Hygeia, and charm away disease, the aches and pains which torture him, he would readily do so. But he does not know how, and, through ignorance, he brutalizes instead of beautifying himself; and, through ignorance, he violates the laws of health, and then suffers the penalty of this violation and sinning. If sins committed in ignorance, against the moral law, may be "winked at," sins against the physical law are punished. Children born of low, dissipated, drunken vagabonds, and permitted to grow up in ignorance, vice, and crime will visit these evils on the society in which they are permitted to dwell. No one lives to himself alone; each is more or less affected by all.

We form character as we form images—by modeling, working, training, education; by the lives we live, aye, by the very thoughts we entertain! "As a man thinketh, so is he." Each thought, each act, each emotion which passes through our minds, leaves its traces on our souls and on our features. Our thoughts and our emotions are the sculptor's chisels,

and our faces show exactly, to the close observer, what is going on within. One who entertains lustful thoughts looks lustful; and this passion is burning within, and will devour him unless he change the current of his thoughts and his blood into other channels, and escape before it be too late. But many, nay, thousands, are engulfed, swallowed up, and lost through this one burning passion of lust. Every feature, every lineament of their bodies and brains has written all over them, in unmistakable signs, the letters, L-U-S-T! Oh, what a purgatory is this!

AVARICE.

Another is given over to avarice. He is too miserly, too mean to be honest. To get pelf is his besetting sin. He craves money, or land, or stocks, or other property, and to secure it he perils health, he perils comfort, he perils home and even life, that he may get and count that which can be his only for a brief space of time, when he must unlock his strong box and leave it all. Look at the miserable miser! His hungry, craving, grasping, shriveled being does not rise above "counting coppers." Look at him! O, wretched creature! He has lost sight of the beautiful in art, improving literature, joyous music, warming friendship, comfortable home, Christian charity, heavenly religion, aye, his God, in the gratification of a morbid *love for money*, which the Scriptures say is the root of all evil—not the money, but the *love* of it. What a character he has formed! How utterly worthless! How utterly miserable and wretched! Deliver us, O Heaven! from that state of mind which knows no sympathy, no kindness, no charity, no peace. Look once more at the mean, selfish, mercenary miser, and then turn to

THE SLAVE OF APPETITE.

In forming *his* character, he sought what he called the luxuries of life, the good things of the table. Plain and

simple food, which makes the purest blood, the best tissue, nerve, muscle, and bone, was not enough for him. To give his food an artificial relish, he must needs mix in pungent condiments, must make it hot and biting with mustard, pepper, spices, etc. Such high seasoning in itself creates an appetite for narcotics. Then the fragrant Havana is required, the pipe, the quid, or, it may be, pulverized tobacco, in the form of snuff. These substances are generally followed by light wines, beer, and the like. Later, something stronger is needed to support the flabby muscles and flagging spirits. What else but alcoholic stimulants can supply the demand of these perverted appetites? One resorts to opium, which must be repeated in larger and larger doses to produce the excitement which the poor, diseased creature craves. This is used for a time in secret, but the habit grows upon the person, and without his accustomed dose he would become almost delirious, as he certainly will if he continues it.

Now comes the guzzling doctor who *advises* alcoholic stimulants. Bourbon or brandy, rum or gin, wines or bitters, are his sovereign remedy—his universal panacea. He says his patients like it, and he prescribes it even for nursing women! Think of a babe taking bourbon through its mother's milk! What will be the state of its appetite when it matures? He will form a character in accordance with these conditions. He will, step by step, puff by puff, sip by sip, become what his inclinations—not his judgment—make him. What harm is there in a social glass, the pipe of peace, or a pinch of titillating snuff? He is forming "character" now. Still, he don't get drunk, though he may become exhilarated; but he frequents the saloons, the club-rooms; is invited out to dine where only "gentlemen" assemble. He visits the race-course, spends

much time at the playhouse, indulges in games of chance. What is the harm? His bets are small, and his winnings nearly equal his losses; and what if his associates are not of the best? Need he become contaminated because they are so? He has no idea that he is even now on the brink of a precipice; a few more steps, a year or two later, and his habits are fixed, as with the graver on steel. He is so perverted, so diseased, that he can not trust himself, nor can others trust him. Now the flood-gates of appetite are open, the bars are down, restraint is thrown off, and the demon rushes his victim to the brink of perdition. He is poised as between heaven and hell. His passions become his master—and he is lost! This is but the picture of thousands who, giving way to a perverted appetite, have gone down to dishonored graves, and left behind a “character” to curse their progeny. Children take after their parents; children inherit a tendency, at least, to follow in the footsteps of their progenitors. Seeing their faults, however, and with resolute self-denial, they may escape, and even eradicate from their blood the disease and poison which they inherit. Then, by higher aspirations and by the grace of God, which is sufficient for all who ask it, they may form a very different character, and come up into manly manhood or beautiful womanhood, fulfilling the ends of their existence, glorifying God through healthy bodies, healthy brains, and regulated minds.

SENSITIVENESS.

Who and what are they who form such unlovely characters that they become morbidly sensitive? So touchy that they “fly in a passion” at the slightest neglect or criticism? Is not this a most unamiable trait? And is it not the duty of such persons to pray for strength and grace to keep their excessive sensitiveness in subjection? Then there

are the complaining, fault-finding, peevish spirits, satisfied with nothing. Such are on the road to despondency, which may end in insanity or suicide. The child begins to form *that* sort of character by sulking, moping, and contrariness. It grows into a “scold,” and ends in a nuisance, which nobody can endure, and is only removed by the scythe of Time.

Reader, where do you stand on this matter of character? Are you drifting slowly down the current of self-indulgence? or are you bravely rowing against the flood and the tide of temptation? Are you cultivating self-denial? Can you say “no” to a selfish desire? Can you subordinate self to the will of your Maker, and can you say, “Thy will be done?” Can you ask God’s blessing on the course you are now pursuing? If so, you may hope to rise and shine, and to leave a name and a character worthy of a godly man.

We are free to choose the right way or the wrong way, the upward way or the downward way. Let us choose wisely; let us choose now.

YOUR RIGHTS.

READER, did it ever occur to you that, while you behave as well, you have as good a right to live in this world as the best one in it? It is verily so. You have a right to work and earn your own living—to be independent. You are not a slave!—except to some habit of self-indulgence, which binds one tighter than with cords of the strongest hemp. One has the right to all the culture and improvement of which he is susceptible. He has a right to worship God according to his own conscience; but unless he become enlightened, his religion will be simply superstition. He has a right to help make

the laws of the land, and then to obey them. He has a right to breathe *fresh air* rather than suffocate in a room filled with filthy tobacco smoke, or bad odors generated in low, dark, dank cellars, where decaying vegetables, putrid fish, or tainted meat are sometimes kept too long. Each man has a right, in this country, to one wife, if *she* be willing; and each woman to a husband, if *he* be willing, and all are of proper age, being of sound mind and body, and not cousins or too near of kindred. In these matters it takes *two* to make a bargain; sometimes three, where there is some scheming, deception, and fraud. Better "go slow" when you go a courting; be sure you are right, lest you regret when too late. Good health, good sense, and good morals will stay, while curls, dimples, frills, flounces, bustles, and false "breast-works" are put on and off, at the pleasure of the wearer. Good teeth and good digestion are useful to have in a family, while headaches, backaches, sideaches, teethaches, and heartaches are very uncomfortable. Better not marry an invalid unless you propose to open an hospital. A great, awkward, clumsy sick man around a house is a —, while a sickish woman, who has laced too tightly, danced too late, or eaten too much froth and foam, and drank too much champagne or "light wine," is even worse. Her little head is hot; her hands and feet are cold; her breath very fragrant, but not at all like the fragrance of lilies or roses.

This comes of fashionable dissipation. Now, we maintain that she has a right to decline this sort of martyrdom, and to *enjoy* the luxuries of plain and simple food, pure water and pure air, with all the sleep she needs. Woman, assert and maintain your rights! The PHRENOLOGICAL JOURNAL will defend you against your enemies. It will try to bring about a better condition of things,

even in fashionable society. We want to release woman from the slavish toil and care now expended on her head-gear. It is not good taste to pile on great wads and rolls of wampum, hemp, or hair, nor is it healthy. One may crimp and frizzle as much as she likes, and look like a negress if she please, and *that* won't impair her health, though she looks like a fright. She has a right to cut her hair short, like Anna Dickinson or Florence Nightingale, if she will, and it's nobody's business but her own. She has a right to be neat, tidy, and comfortable.

We, each of us, have a right to be kindly, charitable, and to fulfill the requirements of the Scriptures and of humanity, by "visiting the fatherless and the widows in their affliction, and keeping ourselves unspotted—unperverted—from the world."

Young men have a right to reject nasty tobacco, when a fool or a felon tries to tempt them to take it; and young women have a right to say No to a gambling, guzzling, smoking, chewing, or snuffing popinjay when he proposes. Indeed, she will but make her own shroud, if she accepts *such* an offer. She has a right to her liberty and her life, though she remain alone for a time.

Oh, the right to breathe, to think, to act, and to do as we like! What a privilege! Then the idea that we may grow in grace, and in a knowledge of heaven and of God! Reader, do you realize your rights? Will you grant the same rights to others which you yourself enjoy? Will you do as you would be done by? Then consummate the crowning act by subordinating yourself to your Maker; by obedience to His laws, and by bringing about that condition which it is your *right* to do, namely, helping to establish a heaven here on earth. This is your duty, your privilege, and your right. Will you do it?

"THE ONE-EYED CONDUCTOR" AGAIN.

OUR spicy neighbor of Philadelphia, *The All-Day City Item*, in noticing the PHRENOLOGICAL JOURNAL, thus refers to the subject which heads this article:

"The PHRENOLOGICAL JOURNAL for November has 'another explanation' with regard to the phenomena of the appearance of the 'one-eyed conductor,' whom, it will be remembered, appeared to a lady some eighteen months after his death, and warned her of an accident which was to take place shortly after—within a few hours; and which the lady escaped by giving heed to this warning. To us, all the explanations are ingenious enough, but they do not touch upon the vital point. That the conductor should be seen plainly, visibly, violently gesticulating, by a person depressed in spirits, broken in health, upon the very spot where she had conversed with him some two years previous, can readily be believed, and one need not go far to find an explanation for such a phenomenon. But how is the fate of the 'accident' which followed the warning to be accounted for? Was it not a mere coincidence? Or are we to understand that others than Spiritualists believe in the return to earth of persons after they are dead. This point is still as obscure as ever, nor have any of the explanations that have reached us in the slightest degree assisted in fathoming it."

We introduced the story of the "One-Eyed Conductor" not to provoke controversy, but because it is a good illustration of one class of psychological phenomena, one phase of the things interesting to everybody, yet mysterious and unaccountable to all but two classes of persons—one class that accepts the Spiritualistic teaching, accepts it as a veritable reappearance of the man who, in the body, had once instructed the lady in regard to signals of danger on a train of cars; the other class is composed of those materialists who explain every phenomenon on the basis of physical science, and who would reduce religious faith and emotion, or the pathetic power of first love to some law of chemistry in relation to carbon, oxygen, and electricity; or endeavor to explain them by some physiological speculation about blood-disks, nerve-cells, brain-waves, etc.

It is amusing to look back over a third of a century and recount the successive changes in the treatment of psychological subjects by a certain class of thinkers, or, rather, talkers. When animal magnetism was introduced,

and by its professional operators apparently innocent and ignorant persons were put into an abnormal condition and appeared to perform wonderful actions, the credulous lookers-on accepted the phenomena in verity; another class of open-minded people accepted the facts and tried to find a philosophical solution of them, while a third class that makes it a special business to conserve the old truths and frighten back all innovators in the field of new thought, objected outright to the whole theory and practice of magnetism, decrying it as the deception of tricky men or as the work of the devil, or, if it had any basis in truth, it consisted in some peculiar susceptibility of the nervous system of an impressible subject.

Not long after this, clairvoyance was announced. The first class, already alluded to, believed thoughtlessly, with open eye and mouth, and uplifted hands. The second class investigated, was astonished, but sought for the philosophy of the subject and professed to have found it; while the third or conservative class repudiated clairvoyance as a superior manifestation, by saying it was only a phase of animal magnetism, and thereby easily explained and understood. Clairvoyants continued to flourish and to manifest powers which seemed to transcend all former conceptions of the possible, and to defy explanation on any hitherto accepted law of physics or metaphysics.

Spirit-rapping was the next step in the realm of the wonderful. It seemed to bring a mysterious intelligence into view, and to act in a way not explicable by any knowledge the world had ever hitherto possessed. Our conservative class, sometimes speaking from the pulpit, sometimes through the press, denounced the new wonder as simply another form of animal magnetism.

"Writing and speaking mediums" next challenged criticism and demanded credence. Then the sturdy objectors said the whole phenomena of spirit visions or writing were produced by clairvoyance, as if the latter were a settled and accepted law.

Thus the world of mind seems to linger but one step behind the foremost mystery—to explain the last by the acceptance of the

previous step in the line of the progress of wonders. Thus spiritual manifestations were only clairvoyance, as clairvoyance recently was only magnetism, and magnetism only electricity in connection with a peculiar condition of the brain and nervous system of susceptible persons.

There must be some law on which may be founded an explanation of all these phenomena. That they exist is unquestionable, nay, demonstrable; but what the law is, how it operates, how much of the manifestations are referable to human magnetism, how much to psychology, and how much to disembodied intelligences, acting upon or through the living, or becoming cognizable to persons in the body, is as yet an open question. It is not for us to say just where the line of truth ends and the domain of deception and error begins. Certain it is that under the Jewish dispensation men believed in the conscious existence of the departed, and in their occasional manifestation to men in the flesh, and all Christendom has believed and taught the doctrine of "the communion of saints" as an article of orthodox faith.

Is it wise or profitable to dogmatize on anything outside of the mathematical, the demonstrable? One generation accepts the advanced ideas which to their grandfathers were heterodox; as a gifted son of that country said, England employs itself in erecting monuments to men of genius whom their fathers permitted to starve.

Let us "try all things and hold fast that which is good," and "let every man be fully persuaded in his own mind."

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"FANNY FERN"—MRS. PARTON.
IN MEMORIAM.

WE have the melancholy task of recording the recent death of another character well known in the walks of American literature.

Sarah Payson Parton, better known by her *nom de plume* of "Fanny Fern," died in the latter part of October. She was born on the 9th of July, 1811, in Portland, Maine, and was the daughter of the distinguished *litterateur*, Nathaniel Willis and his hardly less distinguished wife, and the sister of N. P. Willis, the poet. She was educated at the school recently established on an experimental plan of Miss Cath-

erine Beecher, and was there noted fully as much for her bright and cheerful disposition and queer escapades as she was for her fine intellect and readiness in acquiring knowledge. Shortly after leaving this school in 1837, she was married to Dr. Eldridge, of Boston, and at his death, in 1846, was left with three children in very straitened circumstances. As a means of support, she adopted the profession of literature, for which her wit, sprightly imagination, and ready command of language well fitted her. Her first venture was made in 1851, when she wrote an essay signed "Fanny Fern," for one of the literary weeklies of Boston. From this time forth she wrote largely and constantly, publishing two collections of her sketches, "Fern Leaves" and "Little Ferns for Fanny's Little Friends," and two novels, "Ruth Hall," in 1854, and "Rose Clarke," in 1857. The collections of sketches met with a very large sale; of the first, not less than 75,000 copies being sold, while the second ran through several editions. The novels also sold very well, "Rose Clarke," a cheerful and pleasing story, finding many readers, while "Ruth Hall," being supposed to contain passages from the author's domestic history, was extensively read. In 1856 the popular authoress was married to James Parton, Esq., the well-known and brilliant essayist; and the latter portion of her life has by its happiness compensated for the many trials which in her early and middle life she was forced to undergo. It was our intention to publish a portrait of this lady, but having learned from Mr. Parton that there was no likeness of any kind in possession of the family, we were obliged with much regret to omit it.

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IN THE BASIN OF MINAS.

CAPTAIN BECKWITH, of Hantsport, N. S., with whose name and contributions the readers of the JOURNAL are quite familiar, and Professor William Elder, of Acadia College, have spent a considerable portion of the summer, commencing with the middle of June, in making scientific explorations in the classic Basin of Minas. The *St. John Telegraph* furnishes a summary of their labors thus far, from which we copy:

"They have undertaken the work as a labor of love, on their own account, and mean to go through with it. They are supplied with a boat, a tent, cooking materials, and limited commissariat supplies. They are sometimes supplied from the sea and sometimes from the

land, and are seldom without a good appetite, which makes up for the want of sauce and other delicacies.

"In economical minerals they have made some discoveries. At Wasson's Head, on the Parrsboro shore, they found five small seams of iron, of unusual fineness and purity. Two miles above the same place, at McKay's Bluff, on the coast, among *débris* and shale, they found fossils of the coal-bearing measures. They also discovered a seam of coal, of fine quality, six or eight inches thick. Some of these veins might prove much richer if traced for some length. The mineralogical collection is considered the finest and most *representative*, though not the *bulkiest*, ever made in this region.

"It is said that the explorers have found considerable deposits of at least one new mineral of much value, but those who have attempted to interview them on this subject, have not received much information. No doubt the facts will come out in due time.

"They have given attention to the geology of the Bay, and have fixed the height of Blomidon, which they set down at 1,250 feet. They have fallen in with some fine specimens of basaltic trap. The cathedral rocks, so-called, are as regular and beautiful as the basaltic columns of the Giant's Causeway, forming fine natural arches, caves, etc. In carrying on their scientific explorations, they have dredged the mouths of the Avon, Cornwallis, and Gaspareaux, but their dredging apparatus has been rather imperfect, a circumstance which Professor Baird, of the Smithsonian Institute (who has been engaged on the study of the food fishes, in the Passamaquoddy Bay), kindly offered to remedy, by tendering the use of his own superior dredging apparatus.

"The two scientific explorers will probably complete their geologic researches this season. They will then go into the botany and ichthyology of the Bay and adjacent regions. We hear that their boat is not well adapted to the purpose, being too heavy and cumbersome, making it difficult for the explorers to land at pleasure and haul it to a place of safety. We should suppose that Mr. Selwyn, the Director of the Canadian Geologic Survey, would be glad to have the assistance of such fellow-laborers as Professor Elder and Captain Beckwith. The latter gentleman has given attention to both science and commerce in many lands, and has written a good deal on the subject. The Professor is a Harvard man, and a writer for the leading periodicals of the day.

If the Directors of the Canada Survey would even place a good boat and some suitable apparatus at the disposal of the explorers, this would be a service to them and to the cause of science."

A FEARFUL TEMPERANCE LECTURE.

FROM the police items of the New York *Tribune* we take the following, on which comment is unnecessary, it being in accordance with principles often enough enumerated in our columns:

"Among the names registered at the Tombs the other night was that of a youth, about fifteen years of age, who had been arrested for drunkenness. But he was not drunk, nor had he been drinking. He was, moreover, in good, sound health, but gave all the external indications of being intoxicated when arrested by a police officer. Upon protesting to the keeper of the Tombs that he was not intoxicated, it was revealed that the unfortunate youth had been born a natural drunkard, or, rather, that he had always acted like such a thing. He said that although in good health, he had never been able to walk without staggering. His speech was not unlike that of persons in a decided state of intoxication, and when excited he would mutter and reel. The unfortunate youth was detained until the next day, and was sent to the courts to be gazed at through judicial spectacles. A subsequent investigation of the case proved that the lad had been telling the truth about himself; but his condition revealed a demonstration of the natural law that the child is a fair copy of his parents. It appears that prior to marriage the father had been a secret but confirmed inebriate, and when the facts became known to the woman thus suddenly and unexpectedly, she wept in the most terrible manner. Almost broken-hearted, she contemplated the future misery in store for her. Months passed away, when it was discovered that the child at three years of age acted strangely, and at the end of six months the unhappy woman fully realized all her forebodings. The effect produced upon the mother was not without its influence on the father, however. Realizing, in the midst of tears of bitter anguish, the sin that had been visited on the child, the man reformed. He has now several bright children, and most exemplary ones, too, they are. But the boy that was brought into the Tombs was not drunk, but had entailed upon him a life of misery, as it was a blasted destiny."

Department of Literature, Science, Education.

MEMORY WORSHIP.

WHAT a blessed thing would it be if the teachers of our country could study Phrenology long enough to learn that there are several other faculties of the mind which require culture besides the memory. If they could feel that invention, Constructiveness, Ideality, and the remaining mental organs need development, instead of being allowed to lie almost dormant, what a stride in advance education would take!

Visit any school, listen to the recitations, how much original work is done in the study of any science? First, there is a reading-class. Every member rises in turn, reads a "verse," is corrected in pronunciation, emphasis, or style of delivery, and the class files back to make way for something else. How few faculties besides memory were exercised! In nine out of ten instances no other; no one's attention was directed to the sentiments expressed or facts stated, there was no discussion, no criticism, no thought evoked. If the same class every second day were obliged to bring for a reading lesson a half dozen original lines accurately spelled, illustrating some elocutional nicety, with a definition of every word ready in the mind, interest would be excited, mental action roused, Constructiveness, Causality, Comparison, and other organs, would find work, the whole mind with its various powers would show life, and the thought thus elicited would better aid education than the beauties of any author prosed over in the usual manner.

Perhaps mental arithmetic follows reading, and page after page is analyzed glibly, the teacher smiles approvingly and would dismiss the class only you stop her by asking Johnny Subtraction to make a problem or example himself; then you find, as before, memory is the pack-horse which does all the work. Suppose once in two or three days the class composed and solved examples made by themselves, would a simple request for a home-made problem meet such a blank silence?

Thus the day's work goes on; even gram-

mar, which is pre-eminently concerned with the expression of thought, fares no better than the rest. Instead of pages upon pages of original written illustrations from the pupils, there is only a vast clatter of words called parsing; a little thought is here required, but memory does the chief work.

And through the whole school and college curriculum the same or a very similar plan is followed, with perhaps semi-monthly opportunities to use the whole brain in writing themes. Were it not that pupils must necessarily exercise thought upon the every-day concerns of life outside the school-room, the ordinary course of school education would make more people incompetent for the business of life than it now does. But, finally, there comes a blessed day, when the "education is finished," that is, the memory has been crammed to repletion, while the other faculties have followed the reapers at a distance, gathering as gleaners the scattered grains. What now? Will memory do the world's work as it has done that of the school-room? Now the pupil, male or female, is expected to use grandly the hoards of learning and the results of thought supposed to have been gathered and stored in the workshop of his own mind. There lies the fault; the learning has not been wrought over and woven into the texture of the individual intellect. It proves but an outside starching and dressing that must be principally washed out or, at least, rumpled, crumpled, and crushed before anything can be made of the fine, glossy-looking substance.

A course of study, as generally managed, does not materially aid one in the business of life. Unless the intellect was naturally uncommonly fine and vigorous, it rather trammels than helps. It is only after some years of efforts, struggles, and mistakes, one throws off the idea that his classical education will be of much value in advancing success, and finds that persistent work with all the mental and physical powers is really the great helper on which he may rely.

Most of the students of to-day imagine and believe, as I once imagined and believed, that the quantity of Greek, Latin, and mathematics they force their memories to retain, is the end and aim of an education, and will be the means of bearing them on to honor, wealth, and power. Now, no view of education is more erroneous or injurious, yet it is the usual one. And it is not surprising this is the case when such stress is laid, in schools of every grade, upon the amount of knowledge acquired, and not upon the thought aroused or inquiry suggested.

The world supposed a move had been made in the right direction when object-teaching was first broached, but the system seemed applicable only to the youngest students, and was immediately so hobbled by the one idea class it has fallen almost into disrepute. Still, it served a purpose, and will ultimately gain a higher place in public estimation than it has yet held.

Whatever defects the system has, it is founded upon one grand truth, that thought should be aroused before the memory is so burdened. It is not the cyclopedic mind that aids advancement and improvement; it is the inventive, thought-producing mind. Facts are the fulcrum, thought the Archimedean lever which moves the whole fabric of society. The man of thought always holds the first rank in public estimation. A poet is greater than a king; but we must take care we do not destroy our poets by choking their mental powers with the vast accumulation of truths we heap into the student mind, for there is danger lest we leave no room in which Ideality can work them into living forms and glorious creations. Discipline of mind is necessary, that discipline that comes only by severe, thorough study; but since the world's work requires originality, invention, and judgment, pray let us have some development of these powers and faculties in the world's schools.

AMELIE V. PETTIT.

THE MATERIAL CREATION.

THERE are good Christians and Philosophers, having faith in the religion of Jesus Christ, but who found their theological principles, apparently, entirely upon the teaching of the New Testament, in derogation to *certain portions* of the old. Of this persuasion appears to be "J. E." in the May number of the PHRENOLOGICAL JOURNAL. If the first part of the Genesis were not written by Moses, as some divines suppose; if Eden is a myth, the history of Cain hypothetical—so of the deluge, etc.—if all these were mere abstract allegories, where is the judge to reveal to mankind the fact what certain portions only of Scripture are credible and of authentic authority? and what parts are they? Skepticism, pyrrhonism, loom up fuliginous, and shackle the ethnic soul in such views. For does not the last department of Scripture pivot on the old as a basis? and should the material existence of persons and scenes in the latter be disproved and made abstract legendaries, may not the same "Spirit of inquiry" attack the substantiality of the Gospel? It is likely that such speculative Christians do not understand the danger of incredulity concerning any definition of the real import of Revelation, or they would not thus extend to *rationalism* its strongest logic for creating a generation of ominous doubters.

I read often of pious writers dwelling on Genesis, etc., as if they were the production of Moses alone. Gibbon, in his "Decline and Fall of the Roman Empire," has declared that the organization of the Jews was due to the daring ambition and exertion of a "bold leader," meaning Moses; and thoughtless Christians have occasionally fallen into this identical vein. Is not this all wrong, since Moses was only a passive instrument in the hands of a higher power, was sent unwilling to Pharaoh, was compelled to lead his people, and untimely died, because he ascribed a power to himself, due only to God?

I plead that the friends of religion and of purity of life, *i. e.*, moral perfection—which must intrinsically depend on the Decalogue given by Revelation from the top of Sinai—may be enlightened to comprehend that the truths of Christianity stand on the veracity, as it is written, of Genesis. Did man fall in Eden? Was it from the machination of Satan embodied in the serpent? *Was Christ the promised seed then vaticinated?* Make the substantial concrete of this history a myth of ideal, allegorical abstraction, and the promise of the Messiah a hazy dream, and in the *mille* the massive structure of the cross will be fearfully shaken.

Such reasonings will not do: They are pred-

icated upon Rousseau's idealism—a glittering reverie, which finally convulsed France, and shook it with the horrors of Robespierre and of Bonaparte. It is of the perplexing philosophy of that chemistry, which, dwelling in atoms and molecules, denies, like Berkley, existence to matter, and asserts that no two substances ever possibly touch; that infinite divisibility of concrete things is as endless as the space of the universe. This spirit and abstraction of thought would obliterate all tangibility belonging to vulgar reality.

I must say, we, amid such bewilderments of the reasoning powers, had best return to logical facts, and inductively to give creation its material existence; taking Genesis as written by Moses, under Revelation from on high, in the forty days and nights he was on Sinai, as physically true—not as a physical portraiture of the abstract ideal. Or as well have it said, Adam himself was an abstraction, existing nowhere. *Yet man bodily exists.* When and how, at first?

Geology can not overthrow Revelation, for who can say that matter in chaotic, shapeless fragments was not existent in a confused mass, long anterior to the time when the "Spirit of God moved on the face" of the *already existing* "waters?" Did not these waves cover solid ground, geologically marked? If each day were not a thousand years in the process of creation, here is a nut for skeptics to crack.

"J. E." is a disciple and advocate of Swedenborg's divinity, and evidently would set this man's "Arcana Celestia" on a par with, or above, the gospels of the Evangelists. How can we turn from a record predicted by such history as delineates the origin and lives of that extraordinary people, the Jews, attested by miracles and wonders, and prophesied even at the threshold of creation—and, finally, eventuating in Jesus Christ—how can we turn from all this mighty verification to the obscure glimmering of the writings of Swedenborg? Hath not Christ warned us against "false Christs," or pretenders to his power and sanctity, as well as cautioned us not to "take from or add" to the Bible—as see the closing verses of Revelation? Can we do this for Swedenborg or for the "Golden Bible of Mormonism," or for Mohammed, Buddha Brahma, or the "Indian Great Spirit?" Certainly never! The Bible is sufficient for us. By it we stand or fall. We take it unfigurative, where it does not intend figuration, but facts, entities as plain as Adam—as ourselves.

I respect the pretensions of the great man in so far only as they militate not with Bible facts. Against him I have none but well wishes. Yet we can not, where any is possible, admit interpolations, which, based on nothing but assertion and dreamy fancy, would serve to shake faith in the plain facts described in a book, which, to turn from and forget, or neglect, is the despair of a world. J. J. F.

THE DUKE OF ARGYLE, K.T., D.C.L.

WE publish this sketch of the head of the ancient clan Campbell, as much in response to a demand for its appearance by readers of the JOURNAL as in consideration of the valuable addition it makes to the contents of this number. As indicated in the portrait, the Duke of Argyle has a marked physiognomy, aside from the Scottish type of head. The bold brow, with the strong organs of Locality, Individuality, Weight, Size, Language, and Comparison, shows the close and critical analyst of natural phenomena, the methodical and accurate speaker and writer. The elevated forehead indicates a good knowledge of men

and a warm interest in the welfare of humanity. There is a comprehensiveness in his survey of society and a depth of sympathy in his disposition which incline him to be kind, forbearing, and generous toward those whom the incident of birth has placed among the poor in purse and mental endowment. His top-head evinces a strong religious sense, with quite enough Firmness and Self-Esteem to impress upon his character and bearing a good degree of steadiness, decision, and dignity. As an aristocrat, in the better sense of the word, he is "to the manner born." From the portrait we infer that he has a warm social nature; and al-

though high-spirited and refined, he is not averse to joining a congenial company in the enjoyment of the good things of the table, and to having his share in the enjoyments of social life.

The noble Campbells of Argyle have for

from the marriage of Archibald Campbell with the heiress of Lochow, in Argyleshire, in the reign of Malcolm Cunnmore. Colin Campbell, the sixth in descent from Archibald, obtained celebrity as a warrior, was knighted by Alexander III. in 1280; and having enlarged his estate, he received the



as many as five centuries taken a foremost and active part in public affairs. The surname of Campbell is of great antiquity in Scotland. According to heraldry, it is derived from *De Campo Bello*, a Norman knight and follower of William the Conqueror. The rise of the Argyle family dates

surname Moore, ever afterward borne by the heads of Argyle.

We find in the same line the name of Sir Duncan Campbell, who became a lord of the Scottish Parliament in 1445; and his grandson, Colin, was honored in the same manner. Colin was created Earl of Argyle in 1457 by

James III. Then we have a long succession of earls of more or less renown in Scottish history, until we come down to Archibald, the eighth Earl and first Marquis of Argyle. This illustrious nobleman, whose name is held in high veneration by his Scottish countrymen, was the leader of the Covenanters in the great civil war which rent Scotland to its very foundation. Of lofty patriotism, a staunch Presbyterian, sagacious and experienced as a statesman, he fell soon after the Restoration, a victim to political injustice. At the Cross of Edinburgh, May 27, 1661, he was beheaded. The son of this unfortunate gentleman, also a prominent figure in the movements of that troublous time, suffered in like manner by the hand of the executioner. He had been previously doomed to death on a false charge presented at the instance of the Duke of York, but managed to escape from prison to Holland, where he remained until 1685. His anxiety for the establishment of constitutional government in Great Britain led him to join the rash enterprise of Monmouth. Captured by the minions of despotism, he yielded up his life on the same spot where his father was executed. A well-known painting, in the House of Lords, represents this nobleman peacefully sleeping shortly before his summons to the block. He was a man of noble character and grand aims.

Archibald, the tenth Earl and successor of his unfortunate father, accompanied the Prince of Orange to England. To him the family estates, which had been confiscated, were restored. He was subsequently created the first Duke of Argyle. The sterling qualities and high moral tone of the second Duke of Argyle have been portrayed by Sir Walter Scott in his "Heart of Midlothian." In 1715 this gentleman rendered an important service to the Crown. He commanded the royal forces at the battle of Shropmoor, where he was wounded, yet succeeded in repressing the rebellion in Scotland. For many years he was intrusted with the management of the Scottish forces. He erected an infirmary, a magnificent structure, which subsequently became the seat of the family, and there collected one of the most valuable libraries in Great Britain.

The next Duke of Argyle, whom we may

briefly notice in this rapid genealogical review, was the fifth. In 1766, while his father was still living, he was created a British peer. He was also distinguished by being made President of the Highland Society of Scotland, a society which has done much toward developing the agricultural resources of the Scottish country. The son of the fifth and uncle of the present Duke, succeeded his father in 1806, and is remembered with very kindly feelings in Argyleshire on account of his beneficence as a landlord.

George Douglas Campbell, now holding the title of Duke of Argyle, was born in Dumbartonshire, at the seat of his father, Lord John Campbell, on the 30th of April, 1823. Lord John had served as a soldier in Holland, under the Duke of York and Sir Ralph Abercrombie, and had also represented Argyleshire in Parliament from 1797 to 1820. He succeeded as the seventh Duke on the death of his brother, in 1839. He had two sons, one of whom died when the subject of this sketch was in his sixteenth year, and, consequently, the title of Marquis of Lorne, and the claim to the many dignities of the house of Argyle, were vested in the survivor.

The early years of the young nobleman were spent at his father's residence amid the beautiful and romantic scenery of the Clyde. His education was conducted in private by tutors. Presbyterianism is the hereditary religion of the Argyle family, and the young Marquis seems to have received a living impression of its rights and privileges from his instructors, for at the age of nineteen he published "A Letter to the Peers, from a Peer's Son," which urged, from considerations of constitutional law, the duty of immediate legislative interposition on behalf of the Church of Scotland. At that time a crisis had occurred in Scottish ecclesiastical affairs, brought about by the disruption of the Old Church. This pamphlet was followed, in the same year, 1842, by a letter addressed to Dr. Chalmers, treating on church affairs. The Marquis, however, was no follower of Dr. Chalmers. He took an independent position as a writer, and found no cause to leave the Church, in company with that eminent divine, or to imitate the example of his kinsman, the late Earl of Breadalbane, a representative of the younger branch of the

clan Campbell, who adhered to the secession party and became a member of the Free Church.

In 1844, the year following the division, the Marquis married Lady Elizabeth Georgiana Sutherland, eldest daughter of the second Duke of Sutherland, and on the death of his father, he succeeded, as the eighth Duke, to the family titles and estates of Argyle. Continuing to devote his attention to the subject of the Scottish Church, however, he in 1848 published an essay on the ecclesiastical history of Scotland. This work is frank and honest in tone, but being considered rather dogmatical at the time of its appearance, excited considerable attention. He took his seat in the House of Lords in May, 1848, and delivered his first speech in support of the second reading of the Religious Disabilities Bill.

In the start of his parliamentary career, he took sides with the Whig party, which was then in power, and advocating views in accordance with the hereditary politics of the family; and he has since continued to act with the liberal party. As a speaker, he is clear, forcible, and effective, and has rendered good service in the House of Lords. It was not until 1852, however, that the Duke entered upon office, then accepting the post of Lord Privy Seal. He became a cabinet minister at the age of thirty-three.

In the same year in which the Duke of Argyle joined Aberdeen's ministry, an unexpected honor was paid him, by his election as Chancellor of the first University of Scotland, that of St. Andrew. His election was by a unanimous vote of the *Senatus Academicus*, and was not due to any local influence exerted by the Argyle family, for it had now ceased to be connected with the establishment of Scotland, but was solely owing to his high personal character and growing intellectual eminence. We have already noticed the fact that the Duke was educated privately. In his address to the students of St. Andrew's, he alluded to this circumstance, and dwelt upon the advantages of university training.

By natural taste and capacity, the Duke has ever been disposed to scientific research and philosophic reasoning. His addresses before the British Association and elsewhere

show especially his conversance with the facts and principles of geology. He was selected to preside over a meeting of the British Association, held at Glasgow, in 1855, and his address on that occasion was marked by great ability and by the kindest sympathy with scientific progress. In addition to the several posts of honor already noticed, the presidency of the Royal Society of Ecclesiastical History, of Edinburgh, was conferred upon him. In 1860, in his inaugural address, he gave a sketch of the career of the former President, the late Sir Thomas M. Brisbane, who had succeeded Sir Walter Scott in 1832. He said: "To be chosen President of the Society of which the two former Presidents were Sir Walter Scott and Sir Thomas Brisbane, is indeed an honor of which any Scotchman may well be proud. Sir Walter Scott's unbounded literary fame, and the personal affection in which he was held in Edinburgh, placed him in the front of all men who could be competitors for the chair of the Society, of which already he was the most illustrious member. Sir Thomas Brisbane was not only one of the most renowned soldiers of his day, but was possessed of high scientific attainments. In science, too, he was as wise as he was munificent. I can draw from the choice which you have lately made of a successor to such distinguished men, no other inference than that this Society places a very large and generous interpretation upon the qualifications requisite for its President, and that you are willing, occasionally, to connect the office with those pursuits of public life which, while they are unfavorable, I'm afraid, to any sustained scientific inquiry, are not incompatible with a sincere interest in the progress of science and a high appreciation of its value to mankind."

In 1868 he read a paper before the Geological Society, of which he was a fellow, on "The Physical Geography of Argyleshire." The object of this paper was to controvert certain theories which had found favor with younger geologists, and which had been more particularly published in a volume on the "Scenery of Scotland, viewed in connection with its Physical Geography." According to these theories, subterranean movements and commotions had comparatively

little to do with the formation of the Highlands; the mountains exist not because they have been upreared above the valleys, but because the valleys have been scooped out by the gradual action of ice, water, and atmospheric influences, thus leaving the mountains in relief. The Duke announced that his conviction was precisely the reverse of this; that, although the atmospheric agencies of waste had produced great modifications of the surface, the form of the hills and valleys had been determined by the action of subterranean forces, by upheavals, subsidences, and lateral pressures which have followed and broken the mass of strata into its present diverse shapes. In support of his position, his Grace reasoned with much force from geological facts as exhibited in his own Argyshire, and showed an intimate familiarity with the details of the geology of that part of Scotland.

In 1853 he read before the Geological Society a description of the phenomena presented by the ridges which separated the valley of Loch Awe from the valley of Loch Fyne. According to the Duke, "Every man of liberal education ought to be well grounded in those great principles of physical research which are daily leading to such complicated and magnificent results, both speculative and practical." His own mind is keenly alive to the bearing of those great questions which science has raised with reference to the first appearance and history of the human race. He has stated that the facts brought to light respecting the discovery of flint implements in the various localities, and other vestiges of human activity, indicate a high antiquity for man. The recent work of Darwin, on the "Origin of Species," in his opinion, means nothing less than the method of creation; and this is a subject so profoundly dark that no man can do more than walk carefully around its outer margin, noting here and there some facts more significant than others, which would seem to give hope of entrance into the obscurity within. The truth is, "Creation, of which we speak often, so easily, is a work on which we have no knowledge and can have no conception." Subsequently to this statement, the Duke has given, through periodicals, an expression to kindred thoughts. His

work, the "Reign of Law," is well known. Since 1866 it has gone through several editions. In it the author seeks to show that the invariable order which science delights to contemplate, is by no means incompatible with the belief in an overruling and creative intelligence. The reign of law, according to him, is nothing but the reign of creative thought directed by creative knowledge, working under the control of creative power and in fulfillment of creative purposes. The author had intended to conclude his work with a chapter on "Law in Christian Theology." For the present, however, he has shrunk from entering upon a subject of such critical import and so inseparably connected with religious controversy. More recently the Duke issued a small volume entitled "Primeval Man." Some interesting papers on "Ionia" have also been collected, and published in a separate form. He is the proprietor of that island, so rich in historical associations, and consecrated by the devotional sentiment of the Christian Church. The possession of such property implies duties as well as rights, and it is to be hoped that due protection will be given to the national monuments of "Ionia" from the spoliation of roving barbarians in the form of tourists.

In 1864 a Royal Commission was appointed to inquire into the system of education in Scotland. Of this commission the Duke of Argyll was chosen chairman. The measure which he introduced into the House of Lords in the session of '69, was substantially the measure recommended by said commissioners. It unfortunately failed, and the question of Scottish education remains still unsatisfactorily disposed of. No man in Parliament more thoroughly understood the character and deficiencies of the system of education pursued in Scotland than the Duke. He has a keen and sympathetic appreciation of the views of John Knox, who, when before the Parliament of Scotland 300 years ago, insisted that it was the duty of the state to found a great system of national education.

The Duke is not a supporter of the policy of patronage in the church, as is evident from the fact that at the last General Assembly he intimated his readiness to make over to the church his rights of presentation to vacant livings. At the annual meeting, 1870,

of the Scottish corporation, held on St. Andrew's day, the Duke of Argyle presided. He appeared arrayed in full Highland costume, and in his speech referred to the advantages derived from the union of the two kingdoms.

He has an extensive friendship among men of literary and scientific eminence, many of whom have visited him at his seat at Inverary Castle. Prescott, the American historian, visited Inverary in 1850, in company with Sir Roderick Murchison and Professor Sedgwick. There these eminent men spent a few days of rare enjoyment. The Queen and the late Prince Consort, while on one of their visits to Scotland, were received and entertained at Inverary Castle by the Duke. To the Marquis of Lorne the Queen makes allusion in her leaves of *Our Journal in Highlands*. Perhaps it was at this time that the germs of that affection were born between the Princess Louise and the Marquis, which ripened into the subsequent attachment and marriage. The Marquis was born at the Stafford House, August 6, 1845, and was educated at Eton and at the Universities of St. Andrew's and Cambridge. Soon after the attainment of his majority he was elected a representative of Argyleshire in the House of Commons, and was again returned to that position at the last general election. A volume of travels, entitled "*A Trip to the Tropics*," was published by him in 1867. Lately, a subsequent edition was published. It exhibits fair literary powers, good observation, and independent thought. The announcement of the alliance of the heir of Argyle with a daughter of the royal family gave much general satisfaction in Scotland and the British possessions generally. Perhaps in America it met with much favor on account of the apparent introduction of principles of a democratic complexion into the very midst of royalty.

Returning again to the Duke of Argyle, and as a glimpse of his political views, it may be well to state, that after the resignation of Lord Aberdeen's ministry, he continued to sit in Cabinet as Lord Privy Seal under Lord Palmerston. In July, 1855, Lord Canning, having been appointed Governor-General to India, the Duke was removed to succeed him as Postmaster-General. He remained in this place until the beginning of

1858, when the success of Mr. Milner Gibson's motion compelled Lord Palmerston to retire. But when the latter resumed the reins of power, shortly afterward, viz., in June, 1859, the Duke of Argyle also resumed his former place as Lord Privy Seal, which he held till after Lord Palmerston's death, and until Earl Russel resigned, in January, 1866. Under the government of Gladstone, he held the position of Secretary of State for India, one of the most important portfolios in the gift of a nation.

The Duke has been created a Knight of the Thistle, and is a fellow of the Royal Society and trustee of the British Museum. In 1854 he was chosen Lord Rector of the University of Glasgow. In 1862 the University of Cambridge conferred the degree of LL.D., and last year Oxford bestowed that of D.C.L. The following pen-portrait of the Duke of Argyle, which must conclude our somewhat lengthy notice, is from the author of "*The Gladstone Government*," and which any one who has observed that nobleman's bearing and manner of speaking in the House of Lords, will be able to confirm:

"As a debater, he has distinguished himself in the Parliamentary arena, but almost exclusively as a debater. His manner when speaking, his very appearance, the tone of his oratory are all of them eminently characteristic. When he strides to the table of the House of Lords, his shoulders thrown back, his head erect, his chin in the air, the skirts of his broadcloth coat, one could almost fancy, changed into the Campbell tartan; the bright orange-colored hair feathering up from his forehead, is as an eagle plume in a Highland bonnet; the free, bold gestures are as the brandishing of the claymore; in the very ring of his strident voice there is the clang of the pibroch; it is Macallum More who is there before us rather than George Douglas, the Duke of Argyle. The sphere of the House is his native heather, and his name and fame are those of the Highland chieftain of the great clan Campbell."

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A PECULIAR MAN.—Mr. Z. Pratt, of Prattsville, New York, was, during his life, an exceedingly eccentric character. Not that he married five wives, the last one when he was seventy-five years old, and the bride twenty;

that may have been rash, but could hardly be called eccentric. It was the way he potted about his farm, sculpturing busts on high rocks, and turning portions of his land into cemeteries for his favorite horses and dogs, that constitutes his claim upon our attention. He cut, among other works of art, his own bust and that of his son in a projecting rock dominating the little village of Prattsville. To reach these sculptures he made a winding path, ascending five hundred feet, and furnished at convenient intervals with snug nooks, in which were placed sofas and chairs for the weary. Mr. Pratt had commenced cutting his tomb in the rock below these busts when he died. The way up is enlivened by such inscriptions as these: "23,000 pounds of butter made from 100 cows in 1863, on the farm opposite;" "1,000,000 sides of sole leather tanned with hemlock bark in twenty years. by Z. Pratt;" "20 acres of land donated to the town of Prattsville, by Z.

Pratt;" also other inscriptions, one showing him to have been a member of Congress in 1844. On a terrace below is a mound, in front of which is a tombstone, with the following inscriptions: "The following were the favorites of over 1,000 horses, owned and worn out in the service of Z. Pratt: Bob, 24 years, sorrel; Boyne, 18 years, bay; Prince, 30 years, gray." "Dogs—Carlo, 12; Rife, 11; Mingo, 10."—*Newark Daily Journal*.

[We knew him well. He was a "self-made man;" not highly educated, but full of energy, enterprise, and push. He was temperate in his habits; very industrious, and *succeeded* in business. He was in no sense a bad man, but was foolish only in vanity. He was a fair type of the self-helpful, self-relying, go-a-head new country American, and would make his mark anywhere. Had he been more highly cultured, his aspirations would have been *above* that love for notoriety which was so conspicuous in his character.]

THE ORIGIN OF METALLIFEROUS DEPOSITS.

[An Address by THOMAS S. HUNT, F.R.S., before the Polytechnic Association of the American Institute of New York.]

THERE are about sixty bodies which chemists call elements; the simplest forms of matter which they have been able to extract from the rocky crust of our earth, its waters, and its atmosphere. These substances are distributed in very unequal quantities, and in very different manners. As regards the frequency of these elements in nature, neglecting for the present those which constitute air and water, and confining ourselves to the solid matters of the earth's crust, there are a few which are exceedingly abundant, making up nine-tenths, if not ninety-five-hundredths, of the rocks so far as known to us. The bases, of which silica, alumina, lime, magnesia, potash, and soda are oxyds, are very common, and occur almost everywhere. There are, however, other elements which are much rarer, being found in comparatively small quantities. Many of these rarer elements are, however, of great importance in the economy of nature. Such are the common metals and other substances used in the arts, which occur in nature in quantities relatively very minute, but which have been collected by various agencies, and thus made available for the wants of man. It is chiefly of the well-known metals, iron, copper, silver, and gold that I propose to speak to-night; but there are two other elements, not classed among the metals, which I shall notice for the

reason that their history is extremely important, and will, moreover, enable us to comprehend more clearly some points in that of the metals themselves. I speak of phosphorus and iodine.

You all know the essential part which the former of these, combined as phosphate of lime, plays in the animal economy, in the formation of bones; and how plants require for their proper growth and development a certain amount of phosphorus. Ordinary soils contain only a few thousandths of this element, yet there are agencies at work in nature which gather this diffused phosphorus together in beds of mineral phosphates and in veins of crystalline apatite, which are now sought to enrich impoverished soils. Iodine, an element of great value in medicine and in the art of photography, is widely distributed, but still rarer than phosphorus, yet it abounds in certain mineral waters, and is, moreover, accumulated in marine plants. These extract it from the waters of the sea, where iodine exists in such minute quantities as almost to elude our chemical tests.

There are probably no perfect separations in nature. We can not, without great precautions, get any chemical element in a state of absolute purity, and we have reason to believe that even the rarest elements are everywhere diffused in infinitesimal quantities. The spec-

troscope, which we have lately learned to apply to the investigation alike of the chemistry of our own earth and that of other worlds, once supposed to be beyond the chemist's ken, not only demonstrates the very wide diffusion of various chemical elements here on earth, but shows us that very many of them exist in the sun. If we accept, as most of us are now inclined to do, the nebular hypothesis, and admit that our earth was once, like the sun of to-day, an intensely heated vaporous mass; that it is, in fact, a cooled and condensed portion of that once great nebula of which the sun is also a part—we might expect to find all the elements now discovered in the sun distributed throughout this consolidated globe. We may speculate about the condensation of some of these before others, and their consequent accumulation in the inner parts of the earth, but the fact that we have all the elements of the solar envelope (together with many more) in the exterior portions of our planet, shows that there was, at least, but a very partial concentration and separation of these elements during the period of cooling and condensation. The superficial crust of the earth, from which all the rocks and minerals which we know have been generated, must have contained, diffused through it, from the earliest time, all the elements which we now meet with in our study of the earth, whether still diffused or accumulated, as we often find the rarer elements, in particular veins or beds.

The question now before us is, how have these elements thus been brought together, and why is it that they are not all still widely and universally diffused? Why are the compounds of iron in beds by themselves, copper, silver, and gold gathered together in veins, and iodine concentrated in a few ores and certain mineral waters? That we may the better discern the direction in which we are to look for the solution of this problem, let us premise that all of these elements, in some of their combinations, are more or less soluble in water. There are, in fact, no such things in nature as absolutely insoluble bodies, but all, under certain conditions, are capable of being taken up by water, and again deposited from it. The alchemists sought in vain for a universal solvent, but we now know that water, aided in some cases by heat, pressure, and the presence of certain widely distributed substances, such as carbonic acid and alkaline carbonates and sulphides, will dissolve the most insoluble bodies; so that it may after all be looked upon as the long-sought-for *alkabest* or universal *menstruum*.

Let us now compare the waters of rivers, seas, and subterranean springs, thus impregnated with various chemical elements, with the blood which circulates through our own bodies. The analysis of the blood shows it to contain albuminoids which go to form muscle, fat for the adipose tissues, phosphate of lime for the bones, fluorids for the enamel of the teeth, sulphur which enters largely into the composition of the hair and nails, soda which accumulates in the bile, and potash, which abounds in the flesh-fluid. All of these are dissolved in the blood, and the great problem for the chemical physiologist is to determine how the living organism gathers them from the complex fluid, depositing them here and there, and giving to each part its proper material. This selection is generally ascribed to a certain vital force, peculiar to the living body. I shall not here discuss the vexed question of the nature of the force which determines the assimilation from the blood of these various matters for the needs of the animal organism, further than to say that modern investigations tend to show that it is only a subtler kind of chemistry, and that the study of the nature and relation of colloids and crystalloids, and of the phenomena of chemical diffusion, promises to subordinate all these obscure physiological processes to chemical and physical laws.

Let us now see how far the comparison which we have made between the earth and an animal organism will help us to understand the problem of the distribution of minerals in nature; how far water, the universal solvent, acting in accordance with known chemical and physical laws, will cause the separation of the mixed elements of the earth's crust, and their accumulation in veins and beds in the rocks. The subject is one of great importance to the geologist, who has to consider the genesis of the various rocks and ore-deposits, and the relations, which we are only beginning to understand, between certain metals and particular rocks, and between certain classes of ores and peculiar mineralogical and geological conditions. It is at the same time a vast one, and I can to-night only give you a few illustrations of the chemistry of the earth's crust, and of the laws of the terrestrial circulation, which I have compared to that of the blood distributing throughout the animal frame the elements necessary for its growth. The analogy is not altogether new, since a great French geologist, *Elie de Beaumont*, has already spoken of a terrestrial circulation in regard to certain elements in the earth's crust; though he

has not, so far as I am aware, carried it out to the extent which I propose to-night in my attempt to explain some of the laws which have presided over the distribution of metals in the earth.

The chemist in his laboratory takes advantage of changes of temperature, and of the action of various solvents and precipitants, to separate, in the humid way, one element from another; but to these agencies, in the economy of nature, are added others which we have not yet succeeded in imitating, and which are effected only in growing animals and plants. I repeat it, I do not wish to say that these latter processes are different in kind from those which we command in our laboratories, but rather that these organisms control a far finer and more delicate chemical and physical apparatus than we have yet invented. Plants have the power of selecting from the media in which they live the elements necessary for their support. The growing oak and the grass alike assimilate from the air and waters the carbon, hydrogen, nitrogen, and oxygen which build up their tissues, and at the same time take from the soil a portion of phosphorus, which, though minute, is in both cases essential to the vegetable growth. The acorn of the oak and the grass alike become the food of animals, and the gathered phosphates pass into their bones, which are nearly pure phosphate of lime. In like manner the phosphates from organic waste and decay find their way to the sea, and through the agency of marine vegetation become at last the bony skeletons of fishes. These are, in turn, the prey of carnivorous birds, whose exuviae form on tropical islands beds of phosphatic guano. A history not dissimilar will explain the origin of beds of coprolites and other deposits of mineral phosphates.

But again, these plants or these animals may perish in the sea and be buried in its ooze. The phosphates which they have gathered are not lost, but become fixed in an insoluble form in the clayey matter; and when in the revolutions of ages, these sea-muds, hardened to rock, become dry land, and crumble again to soil, the phosphates are there found ready for the wants of vegetation.

Most of what I have said of phosphates applies equally to the salts of potash, which are not less necessary to the growing plant. From the operation of these laws it results that neither of these elements is found in large quantities in the ocean. This great receptacle of the drainage from the land contains still

smaller quantities of iodine; in fact, the traces of this element present in sea water can scarcely be detected by our most delicate tests. Yet marine plants have the power of separating this iodine, and accumulating it in their tissues, so that the ashes of these plants are not only rich in phosphates and in potash-salts, but contain so much iodine that our supplies of this precious element are almost wholly derived from this source, and that the gathering and burning of sea-weed for the extraction of iodine is in some regions an important industry. When this marine vegetation decays, the iodine which it contains, appears, like the potash and phosphates, to pass into combinations with metals, earths, or earthy phosphates, which retain it in an insoluble state, and in certain cases yield it to percolating saline solutions, which thus give rise to springs rich in iodine.

In all of these processes the action of organic life is direct and assimilative, but there are others in which its agency, although indirect, is not less important. I can hardly conceive of an accumulation of iron, copper, lead, silver, or gold, in the production of which animal or vegetable life has not either directly or indirectly been necessary, and I shall begin to explain my meaning by the case of iron. This, you are aware, is one of the most widely diffused elements in nature; all soils, all growing plants contain it; and it is a necessary element in our blood. Clays and loams contain, however, at best, two or three hundredths of the metal, but so mixed with other matters that we could never make it available for the wants of this iron age of ours. How does it happen that we also find it gathered together in great beds of ore, which furnish an abundant supply of the metal? The chemist finds that the iron, as diffused in the rocks, exists chiefly in combination with oxygen, with which it forms two principal compounds: the first or protoxyd, which is readily soluble in water impregnated with carbonic acid or other feeble acids, and the second or peroxyd, which is insoluble in the same liquids. I do not here speak of the magnetic oxyd, which may be looked upon as a compound of the other two, neutral and indifferent to most natural chemical agencies. The combinations of the first oxyd are either colorless or bluish or greenish in tint, while the peroxyd is reddish-brown, and is the substance known as iron-rust. Ordinary brick-clays are bluish in color, and contain combined iron in the state of protoxyd, but when burned in a kiln they become reddish, because this oxyd absorbs from the air a

further proportion of oxygen, and is converted into peroxyd. But there are clays which are white when burned, and are much prized for this reason. Many of these were once ferruginous clays, which have lost their iron by a process everywhere going on around us. If we dig a ditch in a moist soil which is covered with turf or with decaying vegetation, we may observe that the stagnant water which collects at the bottom soon becomes coated with a shining, iridescent scum, which looks somewhat like oil, but is really a compound of peroxyd of iron. The water as it oozes from the soil is colorless, but has an inky taste from dissolved protoxyd of iron. When exposed to the air, however, this absorbs oxygen, and peroxyd is formed, which is no longer soluble, but separates as a film on the surface of the water, and finally sinks to the bottom as a reddish ochre, which is chiefly peroxyd of iron; or, under somewhat different conditions, becomes aggregated as a massive iron ore. A process identical in kind with this has been at work at the earth's surface ever since there were decaying organic matters, dissolving the iron from the porous rocks, clays, and sands, and gathering it together in beds of iron-ore or iron-ochre. It is not necessary that these rocks and soils should contain the iron in the state of protoxyd, since these organic products (which are themselves dissolved in the water) are able to remove a portion of the oxygen from the insoluble peroxyd, and convert it into the soluble protoxyd of iron, being themselves in part oxydized and converted into carbonic acid in the process.

We find in rock-formations of very different ages beds of sediments which have been deprived of iron by organic agencies, and near them will generally be found the accumulated iron. Go into any coal region, and you will see evidences that this process was at work when the coal-beds were forming. The soil in which the coal-plants grew has been deprived of its iron, and when burned turns white, as do most of the slaty beds from the coal-rocks. It is this ancient soil which constitutes the so-called fire-clays, prized for making fire-bricks, which, from the absence of both iron and alkalies, are very infusible. Interstratified with these we often find, in the form of iron-stone, the separated metal; and thus from the same series of rocks may be obtained the fuel, the ore, and the fire-clay.

From what I have said it will be understood that great deposits of iron ore generally occur in the shape of beds; although waters holding

the compounds of iron in solution have, in some cases, deposited them in fissures or openings in the rocks, thus forming true veins of ore, of which we shall speak further on. I wish now to insist upon the property which dead and decaying organic matters possess of reducing to protoxyd, and rendering soluble, the insoluble peroxyd of iron diffused through the rocks; and reciprocally the power which this peroxyd has of oxydizing and consuming these same organic matters, which are thereby finally converted into carbonic acid and water. This last action, let me say in passing, is illustrated by the destructive action of rusting iron fastenings on moist wood, and the effect of iron-stains in impairing the strength of linen fiber.

We see in the coal formation that the vegetable matter necessary for the production of the iron-ore beds was not wanting, but the question has been asked me, where are the evidences of the organic material which was required to produce the great beds of iron ore found in the ancient crystalline rocks? I answer that the organic matter was, in most cases, entirely consumed in producing these great results; and that it was the large proportion of iron diffused in the soils and waters of these early times, which not only rendered possible the accumulation of such great beds of ore, but oxydized and destroyed the organic matters which in later ages appear in coals, lignites, pyroschists, and bitumens. Some of the carbon of these early times is, however, still preserved in the form of graphite, and it would be possible to calculate how much carbonaceous material was consumed in the formation of the great iron-ore beds of the older rocks, and to determine of how much coal or lignite they are the equivalents.

In the course of ages, however, as a large proportion of the once diffused iron-oxyd has become segregated in the form of beds of ore, and thus removed from the terrestrial circulation, the conditions have grown more favorable for the preservation of the carbonaceous products of vegetable life. The crystalline magnetic and specular oxyds, which constitute a large proportion of the ores of this metal, are almost or altogether indifferent to the action of organic matter. When, however, these ores are reduced in our furnaces, and the resulting metal is exposed to the oxydizing action of a moist atmosphere, it is again converted into iron-rust, which is soluble in water holding organic matters, and may thus be made to enter once more into the terrestrial circulation.

There is another form in which iron is frequently concentrated in nature, that of sulphid, and most frequently as the bisulphid, known as iron-pyrites. This substance is found both in the oldest and the newest rocks, and, like the oxyd of iron, is even to-day forming in certain waters and in beds of mud and silt, where it sometimes takes a beautifully crystalline shape. What are the conditions in which the sulphid of iron is formed and deposited, instead of the oxyd or carbonate of iron? Its production depends, like these, on decaying organic matters. The sulphates of lime and magnesia, which abound in sea-water, and in many other natural waters, when exposed to the action of decaying plants or animals, out of contact of air, are, like peroxyd of iron, deoxydized, and are thereby converted into soluble sulphids; from which, if carbonic acid be present, sulphuretted hydrogen gas is set free. Such soluble sulphids, or sulphuretted hydrogen, are the reagents constantly employed in our laboratories to convert the soluble compounds of many of the common metals, such as iron, zinc, lead, copper, and silver into sulphids, which are insoluble in water and in many acids, and are thus conveniently separated from a great many other bodies. Now, when in a water holding iron-oxyd, sulphates are also present, the action of organic matter, deoxydizing the latter, furnishes the reagent necessary to convert the iron into a sulphid; which in some conditions, not well understood, contains two equivalents of sulphur for one of iron, and constitutes iron-pyrites. I may here say that I have found that the unstable proto-sulphid, which would naturally be first formed, may, under the influence of a persalt of iron, lose one-half of its combined iron; and that from this reaction a stable bisulphid results. This subject of the origin of iron-pyrites is still under investigation.

The reducing action of organic matters upon soluble sulphates is well seen in the sulphuretted hydrogen which is evolved from the stagnant sea-water in the hold of a ship, and which coats silver exposed to it with a black film of sulphid of silver, and for the same reason discolours white-lead paint. The presence of sulphur in the exhalations from some other decaying matters is well known, and in all these cases a soluble compound of iron will act as a disinfectant, partly by fixing the sulphur as an insoluble sulphid. Silver coins brought from the ancient wreck of a treasure-ship in the Spanish Main were found to be deeply incrustated with sulphid of silver, formed in the

ocean's depths by the process just explained, which is one that must go on wherever organic matters and sea-water are present, and atmospheric oxygen excluded.

The chemical history of iron is peculiar; since it requires reducing matters to bring it into solution, and since it may be precipitated alike by oxydation, and by farther reduction, provided sulphates are present. The metals copper, lead, and silver, on the contrary, form compounds more or less soluble in water, from which they are not precipitated by oxygen, but only by reducing agents, which may separate them in some cases in a metallic state, but more frequently as sulphids. The solubility of the salts and oxyds of these metals in water is such that they are found in many mineral springs, in the waters that flow from certain mines, and in the ocean itself, the waters of which have been found to contain copper, silver, and lead. Why, then, do not these metals accumulate in the sea, as the salts of soda have done during long ages? The direct agency of organic life comes again into play, precisely as in the case of phosphorus, iodine, and potash. Marine plants, which absorb these from the sea-water, take up at the same time the metals just named, traces of all of which are found in the ashes of sea-weeds. Copper, moreover, is met with in notable quantities in the blood of many marine molluscous animals, to which it may be as necessary as iron is to our own bodies. Indeed, the blood of man, and of the higher animals, appears never to be without traces of copper as well as iron.

In the open ocean the waters are constantly aerated, so that soluble sulphids are never formed, and the only way in which these dissolved metals can be removed and converted into sulphids is by fixing them in organisms, either vegetable or animal. These, by their decay in the mud of the bottom, or the lagoons of the shore, generate the sulphids which fix their contained metals in an insoluble form, and thus remove them from the terrestrial circulation.

It is not, however, in all cases necessary to invoke the direct action of organisms to separate from water the dissolved metals. It often happens that the waters containing these, instead of finding their way to the ocean, flow into lakes or inclosed basins, as in the case of the drainage-waters of an English copper-mine, which have impregnated the turf of a neighboring bog to such an extent that its ashes have been found a profitable source of copper.

Under certain conditions, not yet well understood, this metal is precipitated by organic matters in the metallic state, but if sulphates are present, a sulphid is formed. Thus, in the slates of Mansfeld, in Germany, sulphid of copper is found incrusting the remains of fishes, and in the sandstones of New Jersey we find it penetrating the stems of ancient trees. I have in my possession a portion of a small trunk taken from the mud of a spring in Ontario, in which the yet undecayed wood of the center is seen to be incrusting by hard metallic iron-pyrites. In like manner the old trees of the New Jersey sandstone became incrusting with copper-sulphid, which, as decay went on, in great part replaced the woody tissue. Similar deposits of sulphids of copper and of iron often took place in basins where the organic matter was present in such a condition or in such quantity as to be entirely decomposed, and to leave no trace of its form, unlike the examples just mentioned. In this way have been formed fahl-bands, and beds of pyrites and other ores.

The fact that such deposits are associated with silver and with gold leads to the conclusion that these metals have obeyed the same laws as iron and copper. It is known that both persalts of iron and soluble sulphids have the power of rendering gold soluble, and its subsequent deposition in the metallic state is then easily understood.

I have endeavored by a few illustrations to show you by what processes some of the more common metals are dissolved and again separated from their solution in insoluble forms. It now remains to say somewhat of the geological relations of ore-deposits, which are naturally divided into two classes; the first including those which occur in beds, and have been formed contemporaneously with the inclosing earthy sediments. Such are the beds of iron ores, which often hold imbedded shells and other organic remains, and the copper-bearing strata already mentioned, in which the metal must have been deposited during the decay of the animal or plant which it incrusts or replaces. But there are other ore-deposits evidently of more recent formation than the rocky strata which inclose them, which have resulted from a process of infiltration, filling up fissures with the ore, or diffusing it irregularly through the rock. It is not always easy to distinguish between the two classes of deposits. Thus a fissure may in some cases be formed and filled between two sundered beds, from which may result a vein that may be mistaken for an in-

terposed stratum. Again, a bed may be so porous that infiltrating waters may diffuse through it a metallic ore, or a metal, in such a manner as to leave it doubtful whether the process was contemporaneous with the disposition of the bed, or posterior to it. But I wish to speak of deposits which are evidently posterior, and occupy fissures in previously-formed strata, constituting true veins. Whether produced by the great movements of the earth's crust, or by the local contraction of the rocks (and both of these causes have in different cases been in operation), such fissures sometimes extend to great lengths and depths; their arrangement and dimensions depending very much on the texture of the rocks which have been subjected to fracture. When a bone in our bodies is broken, nature goes to work to repair the fractured part, and gradually brings to it bony matter, which fills up the little interval, and at length makes the severed parts one again. So when there are fractures in the earth's crust, the circulating waters deposit in the openings mineral matters, which unite the broken portions, and thus make whole again the shattered rocks. Vein-stones are thus formed, and are the work of nature's conservative surgery.

Water, as we have seen, is a universal solvent, and the matters which it may bring and deposit in the fissures of the earth are very various. There is scarcely a spar or an ore to be met with in the stratified rocks that is not also found in some of these vein-stones, which are often very heterogeneous in composition. In certain veins we find the elements of limestone or of granite, and these often include the gems, such as amethyst, topaz, garnet, hyacinth, emerald, and sapphire; while others abound in native metals or in metallic oxyds or sulphids. The nature of the materials thus deposited depends very much on conditions of temperature and of pressure, which affect the solvent power of the liquid, and still more upon the nature of the adjacent rocks and of the waters permeating them. The chemistry of mineral veins is very complicated. Many of these fissures penetrate to a depth of thousands of feet of the earth's crust, and along the channels thus opened the ascending heated subterranean waters may receive in their course various contributions from the overlying strata. From these additions, and from the diminished solubility resulting from a decrease of pressure, deposits of different minerals are formed upon the walls, and the slow changes in composition are often represented by successive layers

of unlike substances. The power of these waters to dissolve and bring from the lower strata their contained metals and spars is probably due in great part to the alkaline carbonates and sulphids which these waters often hold in solution; but the chemical history of the deposition of the ores of iron, lead, copper, silver, tin, and gold, which are found in these veins, demands a lengthened study, and would furnish not less beautiful examples of nature's chemistry than those I have already laid before you.

The process of filling veins has been going on from the earliest ages; we know of some which were formed before the Cambrian rocks were deposited, while others are still forming, as the observations of Phillips have shown us in Nevada, where hot springs rise to the surface and deposit silica, with metallic ores, which incrusts the walls of the fissure. These thermal waters show that the agencies which in past times gave rise to the rich mineral deposits of our western regions, are still at work there.

Let us now consider the beneficent results of the process of vein-making. The precious metals, such as silver, are so sparsely distributed, that even the beds rich in the products of decaying sea-weed, which we have supposed to be deposited from the ocean, would contain too little silver to be profitably extracted. But in the course of ages these sediments, deeply buried, are lixiviated by permeating solutions, which dissolve the silver diffused through a vast mass of rock, and subsequently deposit it in some fissure, it may be in strata far above, as a rich silver ore. This is nature's process of concentration.

We learn from the history which we have just sketched the important conclusion, that amid all the changes of the face of the globe the economy of nature has remained the same. We are apt, in explaining the appearances of the earth's crust, to refer the formation of ore-beds and veins to some distant and remote period, when conditions very unlike the present prevailed, when great convulsions took place, and mysterious forces were at work. Yet the same chemical and physical laws are now, as then, at work; in one part dissolving the iron from the sediments and forming ore-beds, in another separating the rarer metals from the ocean's waters; while in still other regions the consolidated and buried sediments are permeated by heated waters, to which they give up their metallic matters, to be subsequently deposited in veins. These forces are

always in operation, re-arranging the chaotic admixture of elements which results from the constant change and decay around us. The laws which the First Great Cause imposed upon this material universe on the first day are still irresistibly at work fashioning its present order. One great design and purpose is seen to bind in necessary harmony the operations of the mineral with those of the vegetable and animal worlds, and to make all of these contribute to that terrestrial circulation which maintains the life of our mother earth.

While the phenomena of the material world have been looked upon as chemical and physical, it has been customary to speak of those of the organic world as vital. The tendency of modern investigation is, however, to regard the processes of animal and vegetable growth as themselves purely chemical and physical. That this is to a great extent true must be admitted, though I am not prepared to concede that we have in chemical and physical processes the whole secret of organic life. Still we are, in many respects, approximating the phenomena of the organic world to those of the mineral kingdom; and we at the same time learn that these so far interact and depend upon each other that we begin to see a certain truth underlying the notion of those old philosophers who extended to the mineral world the notion of a vital force; which led them to speak of the earth as a great living organism, and to look upon the various changes in its air, its waters, and its rocky depths, as processes belonging to the life of our planet.

[Since this lecture was delivered, I have seen the results of the researches of Sonstadt on the iodine in sea-water, which appear in the *Chemical News* for April 26, May 17, and May 24. According to him this element exists in sea-water, under ordinary conditions, as iodate of calcium, to the amount of about one part of the iodate in 250,000 parts of the water. This compound, by decaying organic matter (and by most other reducing agents), is changed to iodid, from which, apparently by the action of carbonic acid, iodine is set free, and may be separated by agitating the water with bisulphid of carbon. The iodine thus liberated from sea-water by the action of dead organic matters, however, slowly decomposes water in presence of carbonate of calcium, and is reconverted into iodate, the oxygen of the air probably intervening to complete the oxydation, since, according to Sonstadt, iodids are readily converted into iodates under these conditions. He finds that the insolubility of the iodids of

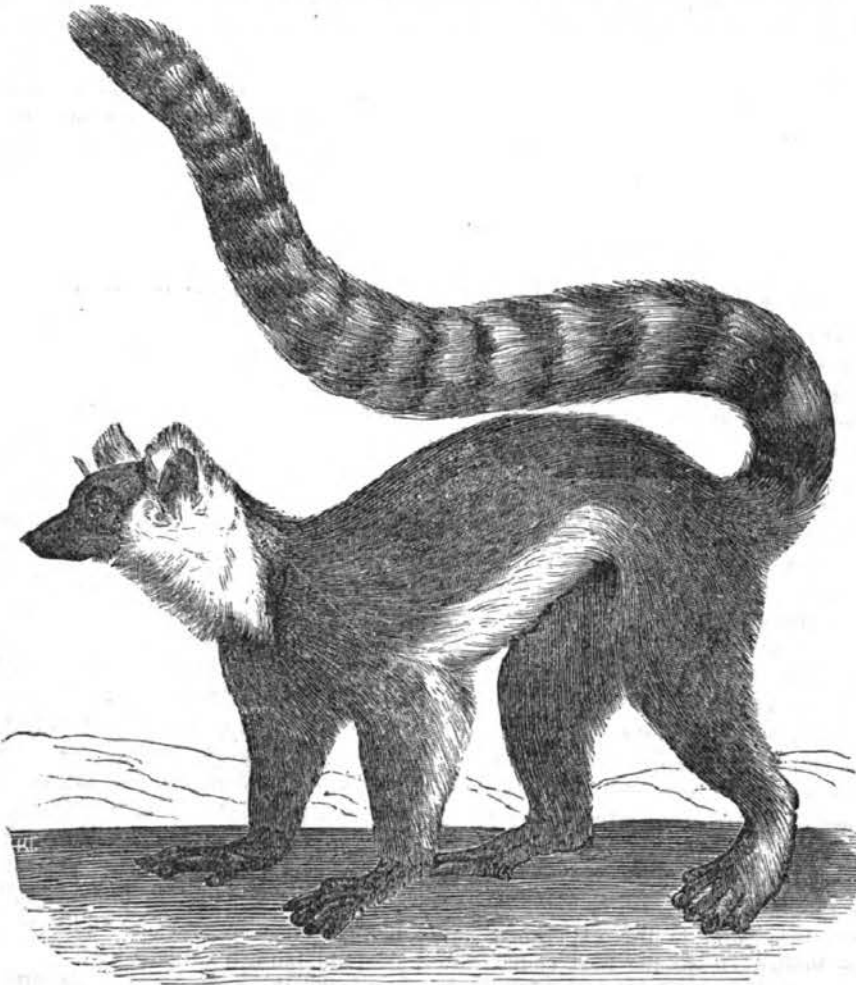
silver and of copper is so great that by the use of salts of these metals iodine may be separated from sea-water, without concentration, provided the iodate of calcium has first been reduced to iodid. By this property of iodine and its compounds to oxydize and be oxydized in

turn, Sonstadt supposes them to perform the important function of consuming the products of organic decay, and so maintaining the salubrity of the ocean's waters. Their action would thus be very similar to that of the oxyds of iron, as explained in the present lecture.]

THE LEMUR-MACOCO.

THE family of the Lemuridæ is allied to the monkey, and in most particulars closely resembles it. The specific difference which has given naturalists their warrant for classifying the lemur by itself, consists mainly in the formation of its extremities, the four

and elongated, the muzzle pointed, the eyes large, the ears small, the hind limbs longer and larger than the fore limbs. We find in some books these animals have been described as differing from all other *mammalia* in the circumstance of their upper canine teeth locking



thumbs being well developed and *opposed* to the fingers, and the first hind finger is armed with a raised and pointed claw, all the other nails being flat (Geoffrey).

The general form of the lemurs is slender

outside or of before the lower; but the fact appears to be that their true lower canines have heretofore been mistaken for additional incisors, which they resemble in general aspect and direction, while the succeeding tooth,

which, from its size and appearance, has been supposed to be the lower canine, is, in reality, the first false molar. In the genus *Tarsius*, however, the true canine assumes more of its ordinary form; and the same is observable of the first false molar in *Microcebus* (Cuvier).

These animals are natives of the warm regions of the Old World; in fact, they are only found now on the island of Madagascar, where they appear to replace the monkey tribe, which, it is said, does not exist there. They live in the forests, subsisting chiefly on fruits, climbing the trees with all the agility of monkeys. The name *Lemur*, of Linnæus, from the Latin, signifying a ghost, has reference to their rapid and peculiarly noiseless movements.

Their species are very numerous, thirteen of which have been definitely ascertained. One of the largest of these is the Macoco, of Buffon, or the Ring-tailed Lemur, a representation of which is furnished by the engraving. In size, it is about that of a large cat. The upper part of the body is of a fine gray color, which as-

sumes a reddish hue on the back and shoulders; on the superior part of the head and of the neck, the color is black, as is also the case with the parts surrounding the eyes and the muzzle. All the other parts of the head, ears, the inner side of the limbs, the under part of the neck, the chest, and abdomen are white; while the tail is alternately colored throughout its length with white and black rings, of which there are upward of thirty. The outline and general characteristics of this species of the lemur are more delicate and beautiful. The macoco is said to be the most easily tamed of the lemur family, and exhibits the most intelligence, although the monkey is much superior in this last respect to it. When pleased, according to Linnæus, the macoco makes a low, rumbling noise, similar to the purr of a cat; but the ordinary voice of these animals is a low grunt, often breaking forth into a hoarse, abrupt roar, which has a startling effect, especially when many thus roar in concert. The lemur is a nocturnal animal, sleeping by day perched on a bough, in a ball-like figure.

THE NEW THEORY OF THE SUN'S HEAT.

THE October number of the PHRENOLOGICAL JOURNAL contains an article by Mr. Chapman in which is propounded a new theory of the source of the sun's heat, or, rather, an old theory revived, for the well-known fact that the atmosphere gets cooler as we ascend long ago gave rise to the impression that the heating power of the sun's rays was due to the action of the atmosphere. As this view has been entirely abandoned as untenable, it may be well to glance at the facts in the case.

It is a curious circumstance that, owing to other agencies with which they are complicated, the apparent results of many experiments are in exact opposition to the truth. Thus, if we take two equal cylinders of bismuth and iron, coat one end of each with wax and place the other end in contact with a hot metal plate, it will be found that the wax on the bismuth will melt first, thus apparently demonstrating that bismuth is a better conductor of heat than iron. But in this experiment the property known as specific heat comes into play, and when we neutralize its effects we find that iron conducts six times as freely as bismuth, thus entirely reversing the decision reached in the former case. Several striking instances of this are to be found in the paper of Mr. Chapman. Thus the opinion that the

moon is "cold" arose from a partial view of the facts in the case. Every scientist now knows that the moon emits heat as well as light, but this very emission of heat occasionally gives rise to a chilling effect, a paradox of the most startling kind. Let us explain it. It has been found that some bodies transmit heat very readily, while others stop it effectually, and, strange to say, those bodies that are transparent to light are not always transparent to heat, if we may be allowed the expression. Thus a sheet of glass permits the cheerful light of the fire to pass through, but it effectually shuts off the heat. Rock-salt allows heat to pass very freely, so freely that it has been called the glass of heat. Moreover, some heat-rays pass more freely than others; thus the direct heat-rays of the sun pass readily through glass, but after being reflected from terrestrial bodies they lose this power. Hence a closed green-house, exposed to the rays of the sun, becomes very hot, because the heat-rays pass freely in, but can not pass back.

Among the bodies that powerfully shut off the heat-rays is watery vapor in a partially condensed form, but when in the state of a perfect gas, that is, when it is no longer partially condensed as in the form of cloud, water allows the heat to pass. When, therefore, the

moon's rays fall upon a cloudy atmosphere, the heat is absorbed by the watery vapor which is then rendered transparent, and a path is opened for the passage of heat between the earth and the moon. But as the earth and the bodies on it are constantly radiating heat, this increase of transparency allows the heat to pass from the earth more freely than it would otherwise do; and as the earth radiates more heat than it receives from the moon, the moon's rays, by opening up a passage for this heat, actually exert a chilling effect. But it does not follow that the moon does not radiate heat, and carefully conducted experiments show that it does do so.

The great fact upon which Mr. Chapman depends is that "as we pass upward through the atmosphere toward the sun, its rays become less and less powerful." Unfortunately for his theory this is not the case, and the apparent proof which he adduces is simply the effect of other agencies. The power of the sun's rays on the tops of high mountains has been very carefully investigated by several observers. Piazz Smith, during his residence on the Peak of Teneriffe, at an elevation of 10,000 feet above the level of the sea, found that the sun's rays were competent to raise the mercury in the thermometer to nearly the boiling point of water, and the direct rays beating upon the person were almost unendurable. Tyndall also tells us that he "never on any occasion suffered so much from solar heat as in descending from the Corridor to the Grand Plateau of Mont Blanc on August 18, 1857; though hip deep in snow at the time, the sun blazed against me with unendurable power. Immersion in the shadow of the Dome du Gouté at once changed my feelings, for here the air was at a freezing temperature." It is not therefore for want of power in the sun's rays, but from other physical causes, which it would take too long to explain, that we find snow on the tops of high mountains. The higher we ascend the more powerful do the sun's rays become, and, to reverse Mr. Chapman's statement, it is certain that the warmth of the sun's rays does depend upon solar heat, and not upon their friction with the atoms of the atmosphere.

JOHN PHIN.

MIGRATION OF SQUIRRELS.—The Memphis *Avant* of the 23d Sept. says: For the past six or eight weeks great numbers of squirrels have been noticed immigrating from Arkansas to Tennessee. At the foot of Island 25, as far

down as the head of 26, a distance of some twenty-five miles, where the Mississippi river is about three-fourths of a mile in width, the squirrels have been in the habit of swimming the river, and during the time named great droves are known to have crossed. Whether the mast is short in Arkansas this season, and starvation is driving them over the wide Mississippi in search of better nut groves, or whether it is merely a freak of fancy on the part of the squirrel tribe, is something that puzzles the river folks.

ANOTHER PUZZLE.

A DUBLIN chambermaid is said to have put twelve travelers into eleven bedrooms, and yet to have given each a separate room. Here we have the eleven bedrooms:

1	2	3	4	5	6	7	8	9	10	11
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"Now," said she, "if two of you gentlemen will go into No. 1, and wait there a few minutes, I'll find a spare room for one of you as soon as I've shown the others to their rooms."

Having thus stowed two gentlemen in No. 1, she put the third in No. 2, the fourth in No. 3, the fifth in No. 4, the sixth in No. 5, the seventh in No. 6, the eighth in No. 7, the ninth in No. 8, the tenth in No. 9, and the eleventh in No. 10. She then came back to No. 1, where, you will remember, she had left the twelfth gentleman along with the first, and said, "I've now accommodated all the rest, and have still a room to spare; so, if one of you will please step into No. 11, you will find it empty." Of course there is a hole in the saucepan somewhere, but we leave the reader to determine exactly where the fallacy is, with just a warning to think twice before deciding as to which, if any, of the travelers was left out.

WISDOM.

THE chains of habit are generally too small to be broken.—*Æt.*

MEN may judge us by the success of our efforts; God looks at the efforts themselves.—*Charlotte Elizabeth.*

MANY a man dreads throwing away his life at once, who shrinks not from throwing it away by piecemeal.—*Howe.*

CONSCIENCE is a delicate seed planted in the heart by God, and no one can so well quicken its growth and blossoming to a fragrant flower as a mother.

THERE is no sin we can be tempted to commit, but we shall find a greater satisfaction in resisting than in committing.—*Mason*.

NOBODY has a right to put another under such a difficulty that he must either hurt the person by telling the truth, or hurt himself by telling what is not true.

STRIKING FACT.—Those who make conscience of speaking the truth, generally prosper in the world; and none are more visibly blasted than those who make no conscience of a lie.

"PUT down on one side of a sheet of paper all the good that ale has done, and on the other all the evil it has done you," said a friend to a thirty-years' drunkard. "That is impossible," was the reply, "for there is not a sheet of paper that ever was made that would contain half of the evil ale has done me."

"Mr mother asked me never to use tobacco; I have never touched it from that time to the present day. She asked me never to gamble, and I have never gambled; I can not tell who is losing in games that are being played. She admonished me, too, against hard drinking; and whatever capacity for endurance I have at present, and whatever usefulness I have, I attribute to having complied with her pious and correct wishes. When I was seven years of age she asked me not to drink, and then I made a resolution of total abstinence; and that I have adhered to it through all time, I owe to my mother."—*Thos. H. Benton*.

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

BOXES, it is said, govern the world—the cartridge box, the ballot box, the jury box, and last, though not least, the bonnet box.

To make a girl love you, coax her to love somebody else. If there is anything that a woman relishes, it is to be contrary.

"I AM not myself to-day," said a bore to a wit. "No matter," was the reply; "whoever else you may be, you're a gainer by the change."

"DRIVER, are you running on time to-day?" asked a passenger in an omnibus. "No, sir," was the keen reply, "we are running for cash."

A QUEER old gentleman being asked what he wished for dinner, replied, "An appetite, good company, something to eat, and a napkin."

The man who called for tea, at an ordinary eating-house, "as strong as the kick of a mule," complains he got it as weak as a good resolution.

AN inquiring citizen of Madison, Indiana, thrust his fingers into a horse's mouth to see how many teeth he had. The horse closed his teeth to see how many fingers the man had. The curiosity of each was fully satisfied.

"CAN you tell me how old the devil is?" asked an irreverent fellow of a clergyman. "My friend, you must keep your own family record," was the reply.

THE following notice is posted conspicuously in a newspaper office out West: "Shut the door, and as soon as you have done talking business, serve your mouth in the same way."

A WYOMING legislator recently advanced the following proposition in a debate on female suffrage: "No woman ain't got no right to set on a jury unless she is a man, and every lawyer knows it, and I don't believe it anyhow."

A FRENCH inventor recently made a public trial of boots designed to aid one to walk on the water. Nothing ever floated more beautifully than those boots did, but the trifling circumstance that they floated wrong side up nearly caused the inventor's death.

A MAN one hundred years old went to have a pair of shoes made. The shop-keeper suggested that he might not live to wear them out, when the old man retorted that he had commenced this one hundred years a good deal stronger than he did the last one.

A YOUNG lady in New Hampshire has just procured a position as school-teacher upon the following certificate: "This is to certify that Tamar Noyes stands on a medium with other girls of her age, and for what I know, is as good as folks in general."

"THAT bed is not long enough for me," said a very tall, gruff Englishman, on being ushered into his bedroom by an Irish waiter at one of our hotels. "Faith, an' you'll find it plenty long, sir, when you get into it," was the reply; "for then there will be two feet more added to it."

AN absent-minded gentleman, writing a letter at the breakfast table, dipped his pen in his coffee and continued his letter. Noticing his mistake, he put a lump of sugar in the ink, and then finding his second blunder, poured the contents of the ink-stand into the coffee-pot to set it right.

THERE is a young lady in Milford, Mass., who has been taking music lessons on the piano for some eight years. The other day she sent an order to a music store in New Haven, and fearing her spelling might not be just right, added this postscript: "You must eskews this letter as I pla bi noat but spel by ere."

THE late Lowell Mason once led the choir in a church where it was the custom to take up the collections during the singing. Determined to put a stop to this, he had an understanding with the collectors to this end. One afternoon, when the usual time for taking the collection came, they kept their seats. The minister inquiring why it was, Mr. Mason said, that as the collection was taken up during the *singing* in the forenoon, they had concluded to have it taken during the *prayer* in the afternoon.

Our Mentorial Bureau.

[In this Department will be noticed such matters as are of interest to correspondents and to the general reader. Contributions for "What They Say" should be brief, pointed, and creamy, to secure publication.]

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. We have no space to gratify idle curiosity. One question only at a time, and that clearly stated, must be propounded. If a correspondent shall expect us to give him the benefit of an early consideration. Questions of personal interest will be promptly answered by letter, if a stamp be inclosed for the return postage. In all cases correspondents should give name and residence, as our time is too valuable to be spent on anonymous letters.

FRECKLES ON THE FACE OF BEAUTY.—We have received a letter lady-like in style and in the delicate spirit of confidence and sincerity, and also lady-like in its desire to get rid of freckles. The writer says she has used —, a most poisonous drug, to remove freckles. It was recommended by a neighbor, but meeting a physician who expressed surprise that she was using so virulent a poison, she abandoned it, and the freckles returned worse than before. She now asks us respecting an article advertised by "Dr." —, of New York, "which will beautify the skin and complexion, and will remove freckles," etc., and desires us to tell her if the "Dr." is reliable and his article likely to produce the result he promises without injury to health. She also inquires respecting a nostrum for the same purpose manufactured by —, of Boston, and asks if it is injurious, and, finally, asks us to tell her of "something which she can safely use." It will be observed we do not mention the names of the manufacturers or venders of the preparations "for beautifying the complexion and removing freckles," as we do not wish to advertise the quacks and rascals who thus prey upon the credulity of sensitive people.

A fair complexion and a good skin are doubtless very desirable. The eager seeking and using of many villainous nostrums to cure freckles, tan, moth patches, etc., furnish the evidence that woman highly prizes these elements of beauty. Some people have such temperamental constitutions that the skin will be relatively rough or dark, or will be freckled, or pale, or sallow, or something undesirable under ordinary conditions. These may spend their money and devote their hope and their time in the use of advertised nostrums, and their money, their hope, and their time will be entirely wasted, and, in addition to this, their general health will suffer, and their skin and complexion will be spoiled.

"But," say the ladies, "If we may not use these advertised specifics, what may we properly do to secure a nice skin and a clear complexion?"

Health is the first element of beauty; and the woman who lives in such a manner as to secure the best of health, will have really the highest order of beauty which belongs to her constitutional make-up. The blonde will still be blonde, and the brunette will still be brunette, each being of its type as beautiful as God ordained. But some people are not fine in figure, graceful in motion, handsome in feature, or brilliant in complexion; and neither the padding nor contracting of parts, by the skill of *modistes*, can rectify the form, nor the patient training of the dancing-master establish easy grace of motion, nor all the drugs of the apothecary or the pigments of the painter give native beauty to the complexion. Health and proper living will do for form, motion, expression, and complexion all that any person can honestly possess, and beauty thus naturally wrought out and wrought in will be real and lasting.

The worst of it all is, that so much thought and care are bestowed on these exterior attractions, and so little on real culture of head and heart. Would a woman be attractive, let her cultivate her mind and her moral power, and no matter how plain the face, if it beam with intelligence and goodness, it will carry with it a fascination which will command love and admiration in spite of its plainness, and secure it in perpetuity. The love of blind persons, we fancy, is very sincere, as they seem to find something besides looks to admire, and we never have felt so highly complimented in any other way as by the affectionate regard of two blind persons.

But there are good, graceful, and naturally beautiful people who, by wrong living, have a sallow, or pale, or muddy complexion, which might be essentially improved. Most people eat too much sugar and fatty matter, and the result is, the blondes are rendered feverish, and their faces break out with pimples, the glands in the neck and elsewhere swell and show symptoms of scrofula, while those of dark or brunette complexion become sallow, bilious, rheumatic, and the complexion is dirty and greasy-looking; and both sorts read quack advertisements of balms and beautifiers of the skin, and pay their money for, and hang their vain hopes upon, these worse than embodied falsehoods—we say worse, because they not only do not cure, but they poison the patient and ruin the skin.

A handsome young lady, of a bright blonde complexion, came to our office for a phrenological de

scription, and just as she was leaving, we asked her if she would like to be rid of the pimples, a myriad of which disfigured her face. The very question excited her hope, and she replied, with enthusiasm, "I would, indeed, sir. What shall I put on? I have tried everything." Our reply was, "Put nothing on, but for three months avoid the use of sugar and oily matter in every form, and your face will be as smooth as you can desire."

"I'll do it," she said, and left with a hopeful and resolute twinkle in her bright, blue eye.

In just a month, instead of three, she came in to report progress, and her face was free from pimples, and had a fresh, clean, peachy appearance. "I have eaten no butter or sugar, or anything that contained them, and you see the happy result," said she. "Now, how much shall I pay you?" We replied, "Nothing; tell the rest of them."

She promised to do it and departed, apparently not quite satisfied that she could not express her thanks with a five dollar bill. "She had spent much on physicians, and grew no better, but rather worse," and now the idea of being cured so simply, so easily, and so effectually, she felt grateful and desired to express her gratitude as she had expressed to the doctors her hopes before, in a "pecuniary consideration." Why did not the doctor tell her? Did he not know the cause and the proper cure? If not, he is to be pitied rather than blamed. When will the people learn by physiology and hygiene how to eat, exercise, and rest, so as to avoid nearly all the illness which afflicts the race?

We know of no way to treat freckles but to use wholesome food and bathe the whole person frequently, and if they will come, let the subject rise above them by making the countenance glow with attractive intelligence. If people who incline to be freckled will live in the dark, the freckles will fade out, and they themselves will be about as white and tender as cellery, which is compelled to grow in the dark under ground, or as potato vines which grow in a dark cellar. We fancy freckles are natural, and, like Roman noses or gray eyes, quack nostrums will not safely or effectually remove them

BRAIN IMPRISONED.—We find the following in the London "English Mechanic":

"12,304—PHRENOLOGY.—Will any of 'our' readers who are well up in this subject (*i. e.*, what is usually understood by the term), kindly inform me at what period of the individual's life the characteristic bumps are developed? It appears to me if the brain exercises any influence on the shape of the cranium, it must be before the latter has assumed its osseous nature; hence, if Phrenology is anything worth calling a science, it is placed on the horns of a dilemma; for either the brain must have received its peculiar developments before Education steps in, or the bones of the head are distorted by the soft mass of the brain. I can't believe the latter, and am very doubtful about the former.

SAUL RYMEA."

Ans. The skull is formed as a servant for the

brain; not as a prison-house, but as a protector. It is a principle in physiology that the hard parts give way for the soft parts. The hard bark of the tree gives way every year for the deposit of the cream-like new ring or grain of wood. When the brain, as a whole, or any particular part of it, requires room, the substance of the bone lying over it is dissolved, absorbed, and sent into the circulation to be deposited elsewhere, and new bony matter is deposited in such a way as to give room for the growing brain. The brain grows according as it is exercised, and the skull gives it room as before described, and this process goes on, sometimes until the man is fifty years of age, as many measurements of heads attest. Usually, however, the head attains its size from the thirtieth to the fortieth year. Of a thousand men engaged in a given pursuit, the heads of men of forty years of age will be found larger than the heads of men of thirty years of age.

Clams and oysters two inches in diameter have shells as thick as an adult human skull, and they are much harder; yet in two years the clam will double in size. How is the hard shell compelled to give place to the soft inhabitant? In a manner precisely as the skull gives place to the brain in the growing human being. The horn of the ox is another example. The growth is from within outwardly, and the hard external protects the soft internal without obstructing its growth. Shell, horn, or skull dissolves like sugar when the growth of their soft inhabitant demands room. The shell has vitality as well as its inhabitant, and is equally subject to the law of growth and change.

The brain gives size and form to the skull, not the skull to the brain. The normal growth of the brain reveals its shape by the form which the skull is compelled to take, and that shape reveals the size of the various mental organs, and by this means we read the character.

How does the bony structure of the child or calf ever become large as in the full-grown man or ox, and each bone retain, all the time, its natural shape, if there is no way by which bone, though hard in material, is permitted to change its particles and readjust its form?

How very critical and incredulous ignorance is, yet how wise and dogmatical!

CHRISTIAN AND INFIDEL.—I am a young man of twenty-one, with considerable obstinacy and large Approbativeness; and having been out in the world for ten years, look older than I am. Now, is there any objection to my marrying a lady two years older than myself, the temperaments, color of the hair, eyes, etc., being very much alike, one of us a member of a church of very strict faith, the other an infidel?

Ans. In general, we think it better for the woman to be two or more years younger than the man, yet there are men who seem older, and are older, by five years than their age by years would indicate. Then there are some women who are particularly youthful for their age. Two persons of this de-

scription might marry, where the woman was four years older than the man, without detriment. If the temperaments, color of hair and eyes are very much alike, that is no objection provided the temperaments, color, etc., are medium. Temperaments are frequently extreme; one is very dark and bony and hardy, the other very light, soft, delicate, and susceptible. Now, for either one of this description to marry one of the same, would be unfavorable. But if a person has a fair blending of all the temperaments, and occupies a medium position in respect to constitutional qualities, he may marry one as nearly like himself as may be, and there is no objection to it.

In respect to being "unequally yoked with unbelievers" (2 Cor. 6-14), there is room for discussion and for the exercise of prudence and wisdom. If one is "obstinate and strong in Approbation," he is not likely to be very yielding or conformatory or mellow in his manner toward a companion who differs with him in religious ideas, more especially if he be "infidel;" there may be opportunity for a great deal of inharmony, not to say unhappiness. If a man is positive in his character and is an infidel, he inclines to denounce and ridicule faith and religious feeling; and as a woman, in religious matters, is more dependent upon the peaceful pursuit of her faith than man, just as marriage is more to her than it is to him, because it is her all, while he has the world and business to divide his thought and care, it would look as if such a marriage would not be favorable. Persons of different religious beliefs, their faith being, in the main, in harmony on the subject of God's moral government and human duty toward God and man, there is only the technicalities of creed and the formalities of worship to divide them. The Presbyterian and the Episcopalian have diversities of opinion, but they harmonize in the great essentials of repentance, faith, and godliness. They might differ as to the best ways of worshipping, but their differences would be only, if we may say it, like the garments, not like the manhood itself. When one doubts and derides religion and God, it would seem to be better that he should unite with one who may not be wounded or offended by what may be said. Some men who are "obstinate" marry religious women with the feeling that she may be right and he wrong, and that he may some time come around to her belief, he being willing that she should educate the children to suit herself, he remaining quiet relative to belief. But one who is a talker and writer in the field of infidelity should marry one whose sensitiveness may not be wounded, and whose tenderest sentiments may not be outraged by having her cherished hope of eternal life counted as naught in the presence of her children, who, she believes, should be educated "in the nurture and admonition of the Lord."

We do not say that a man who is not a church member should not marry a woman who is a member of a church, but one who is a pronounced in-

fel will make a poor woman's life unhappy, or will lead her to renounce her religion so as to keep as much as may be in harmony with her husband. We know men who disbelieve in religious faith of every description, but who are passive, not being disposed to discuss or argue on religious points, and permitting the wife and children to pursue peaceably their religious convictions.

The Jews are strongly set against their people marrying Gentiles; Roman Catholics oppose the marriage of their people with Protestants; the Quakers have discountenanced marrying out of their "Meeting." As a general thing, we believe that it is better for Episcopalians to marry in their own church, for Presbyterians, Baptists, Methodists, Quakers, Jews, and Roman Catholics to do the same; and if one faith is no better than another, the families can at least have peace in themselves on so vital a point as religion. In our work on "Wedlock; or, the Right Relations of the Sexes," this matter is very fully considered.

CHROMO-LITHOGRAPHS.—Will you oblige me by answering, in your valuable JOURNAL, the question which has been debated here, viz., "Is a chromo and a colored lithograph the same?" By so doing you will oblige your old reader,
M. A. S., and many others.

Ans. The products of art you mention are not prepared in the same manner, the chromo-lithograph being made by a series of impressions from as many different stones as there are colors in the picture to be imitated, while the colored lithograph depends for its variety of tint upon the touches of an artist after the stone has done its work in printing a one-colored picture on the paper. The chromo-lithograph is superseding the old-fashioned print. In our JOURNAL for March, 1870, a long and interesting article on the subject was given to our readers.

PHRENOLOGY A SCIENCE.—Should Phrenology be classed as a science?

Ans. Please read Combe's "System of Phrenology," which will furnish the philosophy of the doctrines; "How to Read Character," price \$1.25, will give you the principles of Phrenology, with numerous illustrations; "What to Do and Why," \$1.75, will show its uses in selecting pursuits, and how to educate each man for his proper work.

INJURY TO THE BRAIN.—I take the liberty of addressing you in regard to a question of deep interest to me. I had a severe concussion of the brain last May, from the effects of which I have not fully recovered; loss of memory and pains in the head are the effects. How would you proceed in order to give strength to the brain?

C. L. B.

Ans. When the general health becomes fully restored, if there be no chronic difficulty, the memory will return, and the faculties work with their usual vigor. But there must be temperate living—no smoking, chewing, drinking, or other dissipation.

What They Say.

THE TOBACCO HABIT.—Dear Editor: I notice in your JOURNAL for September an anxious inquirer for a cure for the tobacco appetite. How I do pity any man who will ask such a question! I would like to talk with him a short time and tell him of my experience. I had been a constant user of the weed for forty years, and until two years since, when I laid it away and have not touched it since, nor have I for one moment wished to, and do not think I ever shall again. I would as soon think of cutting off my head as to touch it, and now you or some one may ask how I did it. I will tell you: Just as long as I could keep my will, not to smoke or use tobacco in any form, *stronger* than any desire to smoke (which I had occasionally), just so long I was and am safe. All that is needed is a will—or, rather, a *will not*. I hope this may reach the eye of some poor devil and lead him to try to give up the bad habit, and I hope he may succeed.

C. P.

SOURCE OF THE SUN'S HEAT.—Editor of A. P. J.: In the October number of the JOURNAL I see a theory announced under the above caption, and I desire to state a few objections to it.

The writer says, "A ray of light—a quiver, a vibration from the sun—dashes down through the vast fields of ether and enters our atmosphere." The result is heat, generated by friction. Now, one thing is necessary before we can accept this part of the theory. That light is a substance, must be proved. We can not conceive of friction when there is but one body or substance. I think our best scientists are united in considering light as motion, or a mode of motion. Motion is surely not a material substance.

Again, allowing that rays of light are capable of generating heat by their passage through the atmosphere, in what measure can the rays from the moon differ from those from the sun? They are the rays of a self-luminous body reflected from a non-luminous body. The rays are from the same source, only not so intense when they reach our atmosphere. Still another point. If this theory were sound, the greater distance the rays of light traveled through the atmosphere the greater would be the heat. Such is not the case, as every person of common intelligence knows. Allowing for the greater distribution of the rays of light in winter, owing to their oblique descent, the increase in heat from the additional space traversed, would more than balance the difference of area affected by them, and we should have summers at least as cool as the winters.

G. E. H.

PHRENOLOGICAL LITERATURE.—A correspondent and warm friend of the JOURNAL writes us with reference to a more diffusive method of extending the doctrines of Phrenology.

He counsels the issuing of lectures in pamphlet form, so that we might "instruct classes all over the country." This warm interest pleases us, but we do not think it altogether expedient to follow the suggestion, when there are admirable lectures, viz., George Combe's, already in print, which furnish a succinct yet most clearly-defined and interesting outline of the principles of our science—which we stand ready to furnish on demand (see catalogue) to "all the ministers, students, and very many others through the country, who are looking for something of the kind." Besides, in the JOURNAL itself we have a monthly pamphlet containing valuable phrenological matter adapted to general use.

OUR NEXT PRESIDENT.—The Havre de Grace *Republican* takes exceptions to our platform of principles set forth in a late number, and, instead of indorsing the sort of person we described, says:

"This nation is made up of the peoples of all races, nationalities, and religions; and invidious political distinctions between any of the citizens of this republic on account of religion is anti-republican, and deserves our severest censure and condemnation. Let the citizens of this republic, —Christians, Jews, and Infidels, collectively,—choose, irrespective of his religious opinions, the man they will have to rule over them. In this way only can our democratic institutions be maintained and perpetuated."

While holding to our original proposition, and insisting on having an honest, temperate, and capable statesman for our President, we may ask the Havre de Grace *Republican* whether his "peoples of all races, nationalities, and religions" include women, Indians, negroes, Chinamen, and the rest? Or what does he mean? He has our platform, will he give us his? We want a Democratic-Republic "of the people, by the people, and for the people," not a monarchy, nor a "ruler."

A SHAKER'S OPINION.—When I sent for the January number of the JOURNAL, as a sample number for this year's labors, I took a notion to enter into membership with the Shakers, feeling that it was more Christ-like than others of the various religious bodies, and freer from selfishness and superstition, and the best place to carry out the divine principles of Phrenology with reference to keeping our baser natures in subjection to our spiritual organization. I brought my JOURNALS with me into the society, and loaned them to the brothers, and they became very much interested in them, and so made up a purse and sent on the money, and are receiving them regularly. I will use my best influence to secure them for the next year also—the PHRENOLOGICAL JOURNAL as well as the "Science of Health." As we have all things in common here, I can not depend upon private resources, but upon the body. I live at the north house, second family, and remain your friend in the true mental science,

G. E. G.

The Library.

In this department are given the titles and prices of such New Books as have been received from the publishers. Our readers look to us for these announcements, and we shall endeavor to keep them well informed with reference to the current literature.

CALIFORNIA: For Health, Pleasure, and Residence. A Book for Travelers and Settlers. By Charles Nordhoff, author of "Cape Cod and all Along Shore," etc., etc. One vol.; octavo; pp. 255; muslin. Price, \$2.50. New York: Harper & Brothers.

Among all the books on California and how to go there, with illustrated descriptions of its magnificent scenery, this is the best. The author steps on board a palace railway car in New York, with pencil and paper in hand, and he takes notes by the way. He writes out and sends his descriptions to *Harpers' Magazine*, the *Tribune*, and the *Evening Post*, in which they are published. Then he gathers up these communications, revises them, and adds links here and there to make the chain complete, and with new materials issues a beautiful sectional volume which every American ought to possess. We congratulate author, publishers, and readers on this worthy production.

DR. J. J. I. VON DÖLLINGER'S FABLES Respecting the Popes in the Middle Ages. Translated by Alfred Plummer, Fellow and Tutor of Trinity College, Oxford. Together with Dr. Dollinger's Essay on the "Prophetic Spirit and the Prophecies of the Christian Era." Translated for the American Edition, with an Introduction and Notes, by Henry B. Smith, D.D., Professor in Union Theological Seminary, New York. One vol.; 12mo; pp. 463; muslin. Price, \$2.25. New York: Dodd & Mead.

Rich in scholarship, vivid in imagination, racy in description, and full of intellectual light. That portion relating to the "Prophetic Spirit and the Prophecies of the Christian Era" interests us most. Here is a paragraph out of the introduction on the point:

"For now, as well as throughout mediæval times, it may be said, in a broad, general view, that Latins and Germans, Guelf and Ghibelline, Ultramontanes and Cismontanes, the South and the North, the Papacy and the Empire, are arrayed against each other, and that the destiny of Continental Europe hangs, as it has for fifteen hundred years, upon the results of this conflict. Besides this, however, the topic itself, as here treated, is of profound interest in its psychological, as well as in its historical and religious, connections. Such a historic review shows that man must look before as well as after; he must remember the past and also strive to anticipate the future, especially in great junctures and crises. Belief in Providence, as well as faith in Scripture, prompts men of deep thought and feeling to ascend some mount of vision, whence they may, perchance, descry the shadows of coming events. Nowhere

has this profound theme been treated in so full and compressed a manner as in Dr. Dollinger's admirable summary.

THE MARBLE PROPHECY, and other Poems. By J. G. Holland, author of "Bitter Sweet," "Kathrina," etc., etc. One vol.; 12mo; pp. 112; muslin. Price, \$1.50. New York: Scribner, Armstrong & Co.

Dr. Holland puts his thoughts into verse with that grace and freedom which indicate the true poet. His most recent volume contains, besides "The Marble Prophecy," *The Wings; Intimations; Words; Sleeping and Dreaming; On the Right; Gradation; Returning Clouds; Eureka; Where Shall the Baby's Dimple Be? The Heart of the War; To a Sleeping Singer; Song and Silence.* Here is a taste of the sort of mental pabulum which this "Marble Prophecy" contains:

WANTED.

God, give us men! A time like this demands
Strong minds, great hearts, true faith, and ready hands;
Men whom the lust of office does not kill;
Men whom the spoils of office can not buy;
Men who possess opinions and a will;
Men who have honor—men who will not lie;
Men who can stand before a demagogue
And damn his treacherous flatteries without winking!
Tall men, sun-crowned, who live above the fog
In public duty, and in private thinking;
For while the rabble, with their thumb-worn creeds,
Their large professions and their little deeds,
Mingle in selfish strife, lo! Freedom weeps,
Wrong rules the land, and waiting Justice sleeps!

AUTUMN CATALOGUE and Floral Guide.

Containing a choice Collection of Dutch and Cape Flowering Bulbs, consisting of Hyacinths, Tulips, Narcissus, Crocus, Iris, Lilies, Gladiolus, Anemones, Ranunculus, Ixias, Oxalis, Sparaxia, Scilla, Tritonias, etc. With Full and Explicit Directions for Culture, to which is added a Complete List of small Fruits, containing the most Desirable Varieties Cultivated in this Country. For Sale by B. K. Bliss & Sons, Importers of Garden, Vegetable, and Flower Seeds, and Dealers in Agricultural and Horticultural Implements, Fertilizers, and Garden Requisites, 23 Park Place and 20 Murray Street, New York. Pp. 61. Price, 10 cts.

This is the thirteenth annual edition of Bliss' Catalogue, and from its pages may be gleaned full directions for the cultivation and treatment of flowers, plants, bulbs, and shrubs. Why not send for a copy?

BY SUBSCRIPTION.—KEY TO NORTH AMERICAN BIRDS. Containing a Concise Account of every Species of Living and Fossil Bird at present known, from the Continent North of Mexican and United States Boundary. Illustrated by Six Steel Plates, and upward of 250 Wood Cuts. By Elliott Cones, Assistant-Surgeon United States Army. Octavo; pp. 300. Price, \$6. Salem: Naturalist's Agency; New York: Dodd & Mead.

The work will be printed at the "Salem Press," upon toned paper, and profusely illustrated with cuts, mostly drawn from nature, and engraved expressly for this purpose. The volume will be published in the autumn. It is the intention of

both author and publishers to make the work in every way worthy of the American student, and in order that it may be brought into general use as a text-book, the first edition will consist of twenty-two hundred copies. It is believed that it will hold the place in relation to the study of Ornithology that Packard's "Guide to the Study of Insects" and Gray's "Manual of Botany" do in their respective fields. —

JOHNSON'S NATURAL PHILOSOPHY, and Key to Philosophical Charts. Illustrated with 500 Cuts; being reduced Photographic Copies of all the Diagrams contained in the author's Philosophical Series of Indestructible School Charts. For the Use of Schools and Families. By Frank G. Johnson, A.M., M.D. One vol.; octavo; pp. 494; muslin. Price, \$3.50. New York: J. W. Schermerhorn & Co.

Among the modern school-books, excellent as many of them are, this takes the lead, both as to the method of arrangement and the excellence of its mechanical execution. We do not find a feature to criticise. The student is led along step by step, and each object or principle in natural philosophy is so explained and illustrated that all is made clear to the simplest mind. It is only a "play spell" to follow such an author, and yet one learns, and remembers what he learns. We trust the publishers will find it to "pay" to print school-books as they have this, in the highest style of the art. —

THE MINISTRY OF SONG. By Frances Ridley Havergal. 24mo; pp. 205; green and gold. Price, \$1.50. New York: De Witt C. Lent & Co.

To praise a beautiful poem is like praising one of the rarer beauties of nature—the rose, for example—yet we can not refrain from an expression of admiration when we read the one, or when we behold the other. The "Ministry of Song" is condensed sweetness. Here is a sample of its exquisite flavor:

"Sing to the little children,
And they will listen well;
Sing grand and holy music,
For they can feel its spell.
Tell them the tale of Jephthah;
Then sing them what he said—
'Deeper and deeper still,' and watch
How the little cheek grows red,
And the little breath comes quicker;
They will ne'er forget the tale,
Which the song has fastened surely,
As with a golden nail."

The publishers have made it no less attractive to the eye than the author has made it to the ear and the heart. —

THE POLYTECHNIC: A Collection of Music for Schools, Classes, and Clubs. Compiled and Written by U. C. Burnap and Dr. W. J. Wetmore. One vol.; octavo; pp. 206; muslin. Price, \$1.25. New York: J. W. Schermerhorn & Co.

The most popular melodies by the leading masters, ancient and modern, are given in this "Poly-

technic." We have Auber, Verdi, Offenbach, Bellini, Adam, Donizetti, Gottschalk, Massé, Gounod, Rossini, and others; school songs, college songs, and hymns, with music the most tuneful and ear-haunting. The book will, or should, find its way at once to all music circles, in schools, and in families. —

SMALL-POX: the Predisposing Conditions and their Preventives. With a Scientific Exposition of Vaccination. By Dr. Carl Both. Second edition. 12mo; pp. 82. Price, 75 cts. Boston: Alexander Moore.

The author is opposed to vaccination, and in favor of the liberal use of common salt. He accounts for the comparative absence of small-pox in Boston by stating that more salt is used in that city than elsewhere. Conclusion: If you would escape the small-pox, use plenty of salt. We demur: Salt is not food, but a drug—in excess can not be digested, and has no business in the stomach. —

STUDIES OF CHARACTER FROM THE OLD TESTAMENT. By Thomas Guthrie, D.D. One vol.; 12mo; pp. 436; muslin. Price, \$1.50. New York: Robert Carter & Brothers.

Than the study of human character what is there, what can there be, more instructive or more interesting? In this volume we have the careful analysis by a master mind of the following characters: Abraham, the friend of God; Eliezer, the pattern servant; Joseph, the successful man; Moses, the patriot; Joshua, the colonist; Caleb, the soldier; Boaz, the farmer; Ruth, the virtuous; Gideon, the deliverer; Hannah, the matron; Samuel, the ruler; Jonathan, the friend; David, the afflicted man; Solomon, the wise man; Rehobam, the foolish man; Jehu, the zealot, etc. A galaxy of greatness described, if not in words that burn, in language that impresses and inspires. —

PREMIUMS PAID TO EXPERIENCE. Incidents in my Business Life. By Edward Garrett, author of "Occupations of a Retired Life," etc. One vol.; 12mo; pp. 378; muslin. Price, \$1.75. New York: Dodd & Mead.

The best intimation we can give of the objects of the writer is to copy his chapter headings, under which he writes. They are these: A Well Without Water; Wheat and Tares; The Wisdom of Fools; The Gain of Loss; A Sin of Omission; A Good Situation; An Israelite Indeed; The Cracking of Thorns. The book is a kind monitor, full of useful, practical advice and suggestions which every young man will do well to read and to heed. —

TRAVELS IN SOUTH AFRICA. Compiled and Arranged by Bayard Taylor. One vol.; 12mo; pp. 336; muslin. Price, \$1.50. New York: Scribner, Armstrong & Co.

It is not enough that Livingstone, Moffat, Anderson, Cummings, Baker, Grant, Speke, Magyar, Du Chailu, Stanley, and others should describe parts and places of this wonderful country, but our own native American explorer, Bayard Taylor, who began on foot to "see the world," while yet in his